MONTHLY LABORATORY NUMBER

THE CANNER AND DRIED FRUIT PACKER

Vol. XXV. No. 3 CHICAGO, THURSDAY AUGUST 1, 1907 Whole No. 653

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Packers' Hole and Cap Cans

WE MANUFACTURE ALL THE REGULAR AND SPECIAL SIZES REQUIRED FOR:—

TOMATOES	CORN	CLAMS
PEACHES	BEANS	OYSTERS
PEARS	PEAS	SOUPS
APPLES	BEETS	FISH

And all other Varieties of Canned Foods

SUBMIT YOUR REQUIREMENTS

AMERICAN CAN COMPANY

NEW YORK BALTIMORE CHICAGO SAN FRANCISCO

THIS PAGE DEVOTED TO MEMBERS OF

National Canned Goods and Dried Fruit Brokers' Ass'n.

SECRETARY—J. L. FLANNERY, JR., CHICAGO, ILL.

W. H. NICHOLLS & CO.
Canned Goods Brokers
33-35 River St. ——— CHICAGO

J. K. ARMSBY CO.
Wholesale...
Brokerage and Commission
Branches... San Francisco, Boston, New York, Los Angeles
Pacific Coast Products
42 River St., CHICAGO

LUMAN R. WING & CO.
WHOLESALE COMMISSION MERCHANTS IN
Salmon, Canned Goods, Raisins, Dried Fruits, Etc.
2-4 Wabash Avenue, Chicago

SAM BAER & CO.
Brokerage and Commission
Canned Goods and Dried Fruits
Write Us.
34 WABASH AVE., CHICAGO

GOODLETT & BOLLES
GROCERY BROKERAGE
Canned Goods, Dried Fruits
Cans, Boxes, Labels
KANSAS CITY, MISSOURI

E. C. SHRINER & CO.
Manufacturers' Agents and Brokers in
Canned Goods and Cans
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BROKERS AND MANUFACTURERS AGENTS
OFFICES
Dallas Mercantile Co., Dallas, Texas.
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We travel men. DALLAS, TEX.

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EDWARD P. SILLS
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42 RIVER ST., CHICAGO
Correspondence Solicited
Liberal Advances on Consignments.

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OFFICES: OMAHA, ST. PAUL, MINNEAPOLIS
CANNED GOODS
DRIED FRUITS
CANNERS AND PACKERS AGENTS
CORRESPONDENCE SOLICITED
Personally Cover all Jobbers in Nebraska and Minnesota.

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Brokerage Commission
Canned Goods and Dried Fruits
42 RIVER ST., CHICAGO

AHRONS-SEIBERT CO., LTD.
NEW ORLEANS
CANNED GOODS BROKERS
Selling Agents Southern Packers
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Correspondence Solicited.

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BROKER
42 RIVER ST. - CHICAGO

S. P. CALKINS & CO.
MERCHANDISE BROKERS
To Jobbers Only.
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MEMPHIS, TENN.

FERD. C. WHEELER, Jr.
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PITTSBURG, PA.
Canned Goods and General Merchandise
BROKER
Personally cover all jobbers within a radius of 100 miles of Pittsburg

WALTER A. FROST & CO.
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Canned Goods and Dried Fruits
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LOUIS M. PARK COMPANY
Established 1896
OFFICES Minneapolis, St. Paul, Duluth
Canned Goods Brokers
Note.—We cover all jobbing points tributary to these cities. No better equipped brokerage firm in the west.

WILLIAM DUGDALE
CANNED GOODS COMMISSION AND CANNERS' SUPPLIES
301 Majestic Building
INDIANAPOLIS, IND.

GETTYS & GILBERT,
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CANNED GOODS, DRIED FRUITS, SALMON, CALIFORNIA PRODUCTS
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C. A. Vandever — Vandever & Schroeder
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ESTABLISHED 1868
Canned Goods and Cans
BROKERS

SEAVEY & FLARSHEIM
Merchandise Brokers
CANNED GOODS

Kansas City, Mo.
St. Louis, Mo.
St. Joseph, Mo.
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Cover all jobbing centers adjacent to above cities

Canned Goods Brokers and Commission Houses

THE J. M. PAVER COMPANY

EXCLUSIVE CANNED GOODS BROKERS

INDIANAPOLIS, IND., Majestic Bldg. CHICAGO, ILL., 53 River St. ST. LOUIS, MO., 605 Granite Bldg

JACOB ENOCH

936 E. 168th St., New York City

Mdse. Broker and Mfrs. Representative

SPECIALTIES:

SAUERKRAUT, DILL PICKLES

VINEGAR and CATSUP

and all PICKLED PRODUCTS

Agent for German Kraut Cutting Machines

BAKER & MORGAN

Wholesale Selling Agents

BROKERS

NASHVILLE, TENN.

Twelve years experience in Selling to the Jobbing Trade.

Five years experience as General Manager of Canning Factory.

E. T. KIRKPATRICK & CO.

CANNED GOODS BROKERS

ABERDEEN, - MARYLAND

Our Specialties

CORN & TOMATOES

EVERY DAY an OPPORTUNITY

These are strenuous days, when competition sharpens our wits and tests the metal of which we are made — days when the words of the poet assume a practical application:

"There is a tide in the affairs
of men when taken at its flood leads
on to fortune."

The successful man of today is the busy man, but not the man who is too busy. Opportunity comes to all. He who is master of his opportunities wins. So likewise, the meritorious product triumphs over the inferior article.

Mr. Canner, are you taking advantage of the great opportunities offered by

WYANDOTTE
Canner's Cleaner and Cleanser

None Genuine except with this Trade Mark

TRADE MARK WYANDOTTE CLEANER AND CLEANSER

Many are, then why not you? Ask your supply man for

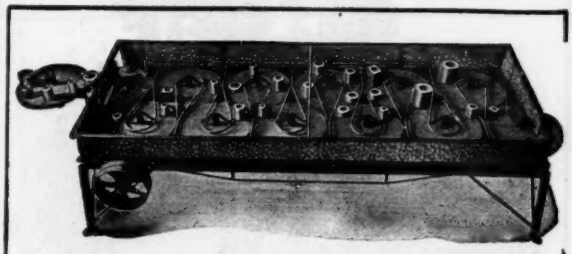
Wayndotte Canner's Cleaner and Cleanser.

In Every Barrel.

THE J. B. FORD CO.,

SOLE MANUFACTURERS

BUFFALO WYANDOTTE CHICAGO



Hawkins
Universal Exhauster.

The cans are received in single line automatically and carried by intercommunicating revolving discs. The steam is supplied by curved pipes which conform to the lines of travel of the cans.

This machine can be furnished any size and any capacity desired.

Standard Sizes	Capacity 3 lb. Cans	SIZE
No. 8	45 per min.	5x11 ft.
10	57 "	5x13 "
12	68 "	5x15 "
14	80 "	5x17 "
16	91 "	5x19 "

For further particulars address

SPRAGUE CANNING MACHINERY CO.

42 RIVER ST., CHICAGO.

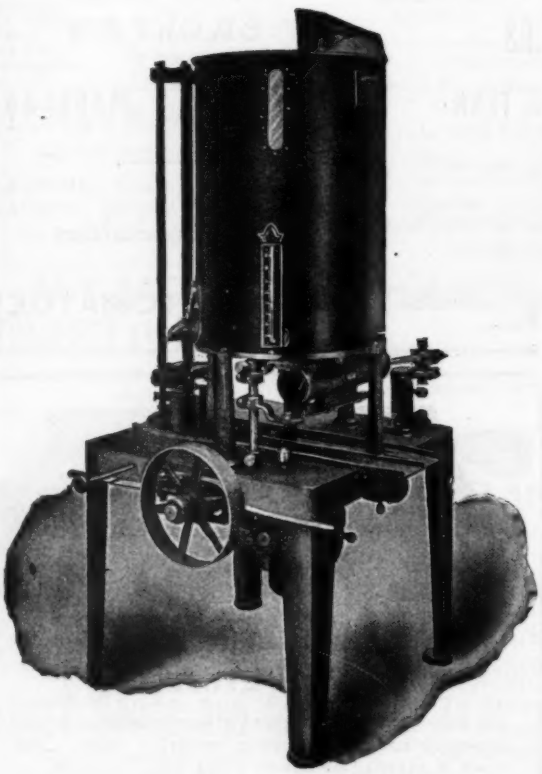
COTTINGHAM

SELLS

CANNING MACHINERY OF ALL KINDS

INCLUDING THE CELEBRATED

Queen Anne Cooker



SIMPLE—Light Running—Easy to Clean—None Better

SEND FOR DESCRIPTION, TERMS, ETC

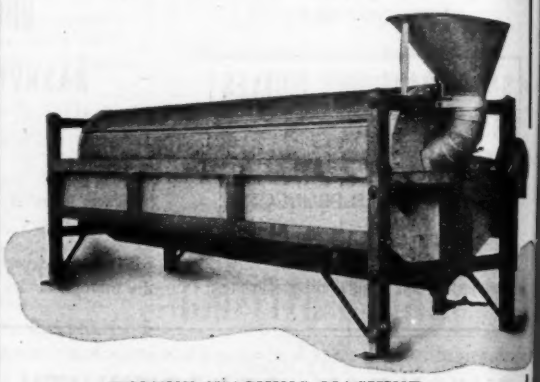
ADDRESS

H. COTTINGHAM,

BALTIMORE, MD.

Hominy!

¶ The packing of this article has proceeded thus far with but crude and home made apparatus for doing the work. The demand for this excellent article of food has, however, grown so rapidly that special machinery is now demanded for its manufacture. We are prepared to satisfy this demand with a line of simple, substantial and effective machines which at the same time does not call for a large expenditure in the equipment.



HOMINY WASHING MACHINE

¶ This line consists of the following machines which cover each step in the process:

Mixing Machine
Chitting or Hulling Machine
Washing Machine
Boiling Out Kettles

¶ The above machines are so designed as to make the work continuous and systematic.

¶ After treatment by the above machines the corn is ready for the can and for the remainder of the process, such as filling, capping and sterilizing, our well-known line of Plummer, Hawkins and Sprague apparatus can be adapted to these operations. We are prepared to furnish all formulas and instructions necessary for properly preparing this article to all purchasers of the machinery.

¶ We invite the correspondence of all interested.

Sprague Canning Machinery Co.
42 RIVER STREET
CHICAGO

WE BUY TIN SCRAP

LAST WASTE ANY SIZE OR SHAPE WRITE TO US

THE VULCAN DETINNING CO.

157 Cedar St., NEW YORK, AND STREATOR, ILL.

Charles S. Trench & Co.

BROKERS IN

PIG TIN AND TIN PLATE

81 FULTON STREET :: NEW YORK

THE CHISHOLM-SCOTT CO.

PEA HULLING MACHINERY

Works: SUSPENSION BRIDGE, Niagara Falls, N. Y.

Baltimore Headquarters at office of the SINCLAIR-SCOTT CO., Wells and Patapsco Sts., Rear of 1800 Light St.

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GENERAL BUSINESS CORRESPONDENCE

ADDRESS US

Cadiz, Ohio

RAYMOND LEAD COMPANY

LAKE AND CLINTON STREETS

CHICAGO

MANUFACTURERS OF

SOLDERS

OF ALL KINDS FOR

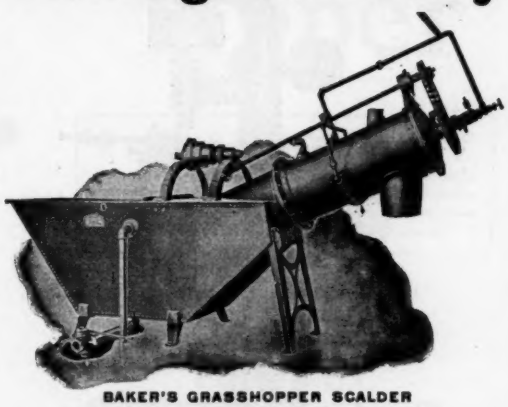
Canners' Use

Pig and Bar Lead and Tin

Unequaled Facilities for Manufacturing a Uniformly Superior Quality of Goods

Write for Prices, Stating Composition and Quantity Wanted

TOMATO Canning Machinery



BAKER'S GRASSHOPPER SCALDER

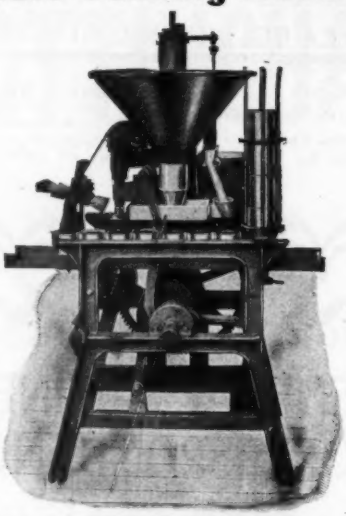
We manufacture a Full Line of Tomato Canning Machinery, including the above well known machine. Send for circulars

SPRAGUE CANNING MACHINERY CO.

Daniel G. Trench & Co., General Agents,

CHICAGO, : : : : ILLINOIS

Tomato Canning Machinery

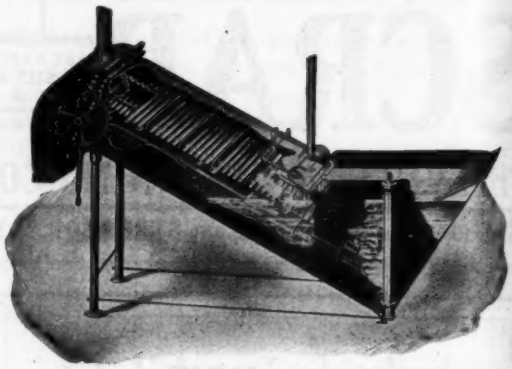


The Jersey Queen
TOMATO FILLER

We manufacture a full line of Tomato Canning Machinery, including the above well known machine. Send for circulars.

SPRAGUE CANNING MACHINERY CO.
DANIEL G. TRENCH & CO., General Agents, CHICAGO, ILL.

TOMATO CANNING MACHINERY

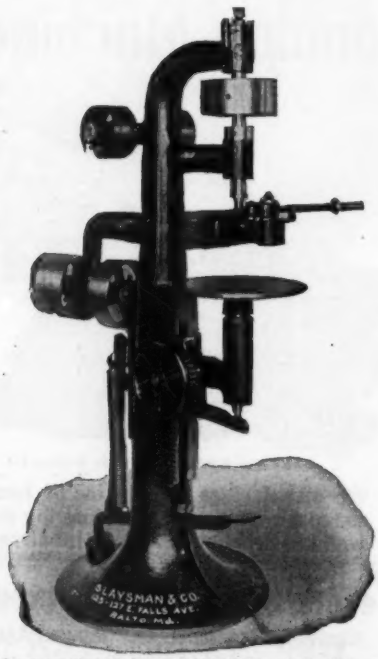


THE TRIUMPH SCALDER

We manufacture a full line of Tomato Canning Machinery, including the above well known machine. Send for circulars.

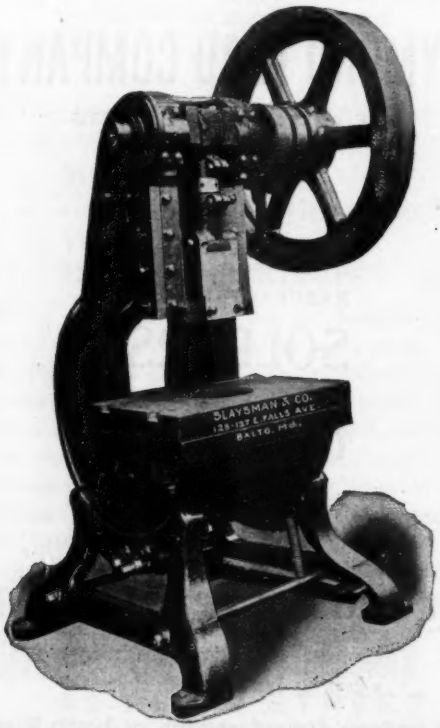
Sprague Canning Machinery Co.
DANIEL G. TRENCH & CO., General Agents
CHICAGO, ILL.

"Slaysman" Double Seaming Machine
No. 2



This machine may also be made with counter shaft with cone pulley, so as to permit of adapting the speed to different diameters.

"Slaysman" Inclinable Power Press"
No. 5



The above illustration represents the general style and appearance of the No. 5 Power Press, it can be used in an inclined position if desirable. It is well made, as all Bearings are reamed and scraped.

WRITE FOR PRICES AND DISCOUNTS

Slaysman & Co., Factory: 125-127 E. Falls Ave. Office and Salesroom: 200 W. Falls Ave.
BALTIMORE. . . . . MARYLAND

THE MARLOU CHEMICAL WORKS
Office and Works, Warren and Bay Sts.
JERSEY CITY, N. J., U. S. A.

THE BULLOCK-WAIT COMPANY
—AGENTS—
86 Lake Street, Chicago

RECOMMENDED BY ALL WHO USE IT.

YOU WILL USE IT AND RECOMMEND IT AFTER YOU HAVE TRIED IT

It is made for you especially.

You can increase your out-put by using it, saving labor, time and solder without any risk of spoiling anything, and you will have less leaks.

Standard Soldering Flux

You cannot get a purer flux nor a stronger one.

Let us enter your order now for shipment from the nearest point to you.

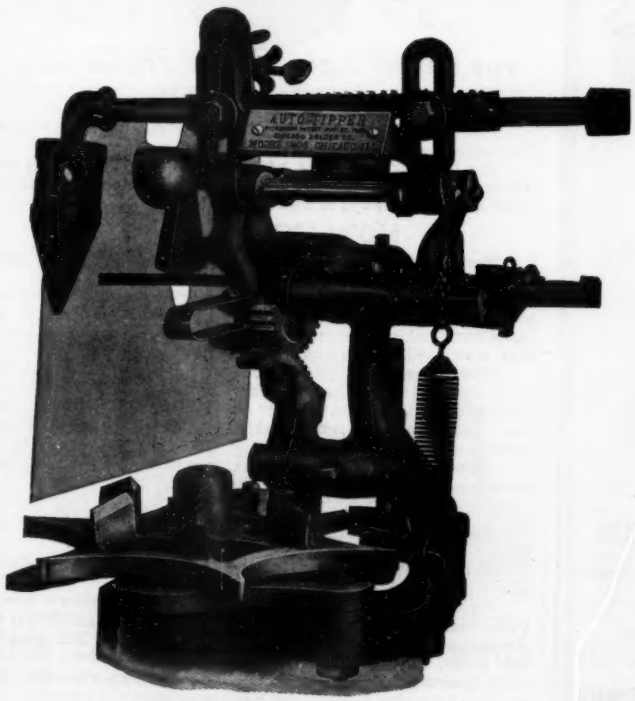
All Agents have a large stock.

WRITE US; LET US TELL YOU MORE ABOUT IT.

Standard Soldering Flux complies with all requirements of the Pure Food Law

S. O. RANDALL, Agent
Marine Bank Bldg., Baltimore

J. E. LASTRAPES, Agent
524 Gravier St., New Orleans



The Auto-Tipper

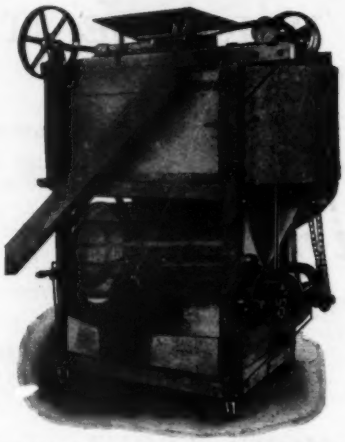
¶ Attaches to the Hawkins Capper. Hundreds in successful operation on all classes of goods. Perfectly automatic and reliable. Same capacity as capper. Easily adjusted in every respect. Less solder, less leaks. Adapted for 2, 2½ and 3 lb. cans.

FULLY GUARANTEED

ORDER EARLY.
We have to refuse late orders every year

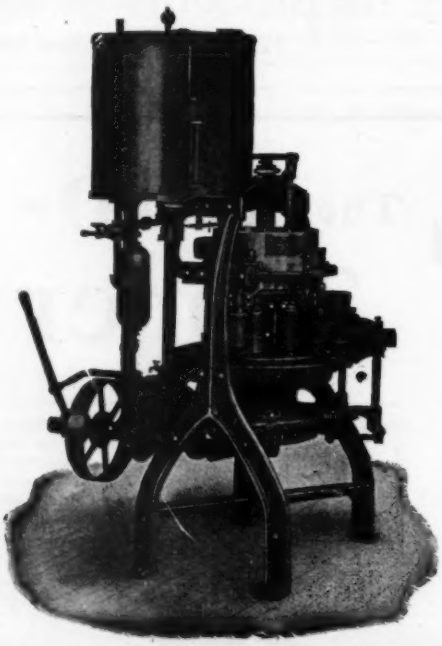
Chicago Solder Co.
44-56 N. Union St., CHICAGO, ILL.

Corn Canning Machinery



THE ULERY M. & S. SELF CLEANING CORN SILKER

Makes a great improvement in removal of Silk as compared with all other machines—and is in use in nearly all the large factories.

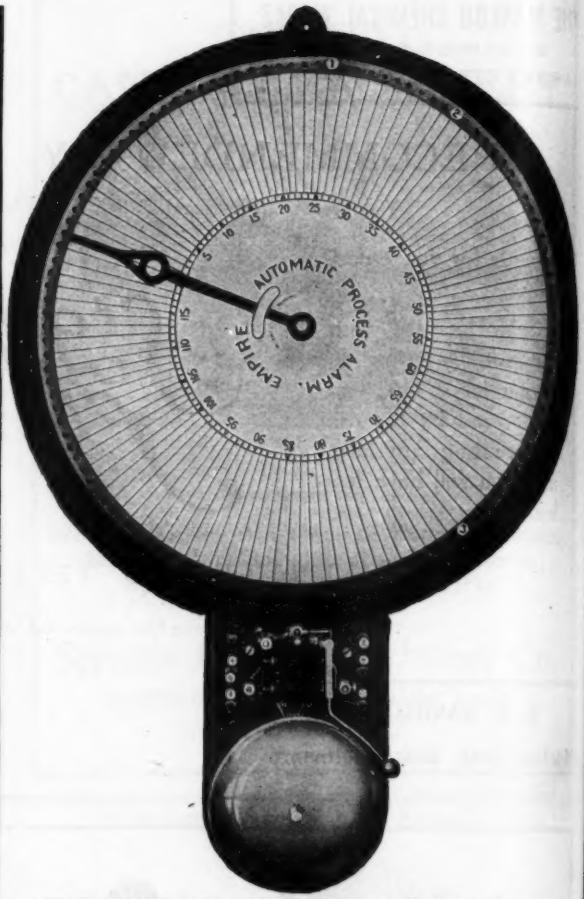


The Celebrated MERRELL-SOULE CORN COOKER FILLER

We manufacture a full line of Corn Machinery including the well known Model M. Sprague Cutters.
Send for detail descriptions.

Sprague Canning Machinery Company

DANIEL G. TRENCH & CO., General Agents, CHICAGO, ILL.



THE EMPIRE CLOCK—Automatic Process Alarm

HOW IT WORKS

The outer frame with plug holes is stationary. The inner dial marked with numbers indicating minutes revolves.

The hand or pointer is **attached to the inner dial** and revolves with the inner dial (relative position of hand to number on dial always remains the same.)

HOW TO WORK IT

Number each of your process kettles and see that you have a similarly numbered plug for each kettle.

Place a plug (with number on it corresponding with number on a process kettle which is ready to be timed) in the hole on outer frame which happens to be opposite the figure on inner dial, which indicates the number of minutes you wish to cook.

The pointer or hand attached to and travelling with the inner dial will reach that plug and set off alarm (electric connection to gong) in the number of minutes corresponding with the number on the inner dial which was opposite that plug when it was first inserted.

Unload kettle which bears same number as the plug—remove plug.

Any ordinary number of kettles may be timed with one clock.

Forget that hands of a clock travel past numbers on a dial—The hand of this clock does not.

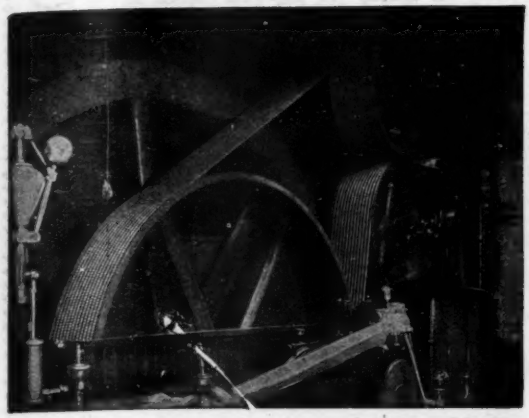
Remember that the hand of this clock will always pass a point marked on the outer frame opposite a given number on the dial in the number of minutes indicated on the dial opposite that point, when the point is marked, and you will see that this clock is always ready and no figuring necessary, except to put in plugs opposite figures which indicate length of process.

For further particulars address

SPRAGUE CANNING MACHINERY COMPANY

DANIEL G. TRENCH & CO. General Agents

Power Transmitting, Elevating and Conveying Machinery



Rope Transmission Appliances,
Chain Belting,
Sprocket Wheels,
Friction Clutches,
Shafting, Pulleys, Gearing.

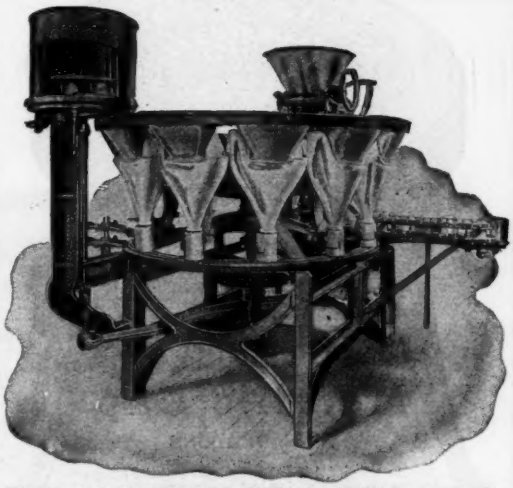
Belt Conveyors for all purposes,
Barrel Elevators,
Package Carriers,
Spiral Conveyors,
Elevator Buckets.

NEW BUCKLIN PEA FILLER AND BRINER

Webster M'f'g. Co.,
1075-1097 West Fifteenth St., CHICAGO

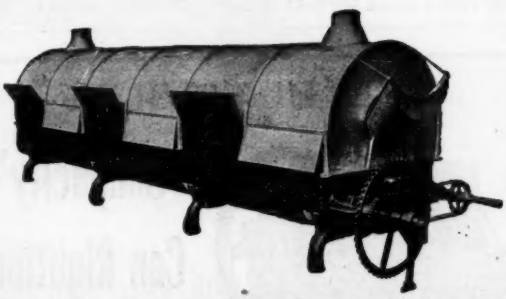
MANUFACTURED BY
The Sinclair-Scott Company
Manufacturers of Canning House Machinery
BALTIMORE, MD.

MANUFACTURERS OF THE STRICTLY HIGH GRADE NICKEL STEEL "MARYLAND" AUTOMOBILE



THE PLUMMER PEA FILLER

Fills ALL grades equally well—works without plunger, stirrer or other forcible means for preventing clogging. Never damages even the most tender Peas. Large capacity yet slow in motion — **Simple, Sanitary, Durable.** Guaranteed superior to all other machines used for same purpose.



THE PLUMMER PEA BLANCHER

is the **only triple bath Blancher** and embodies the
ONLY SCIENTIFICALLY CORRECT METHOD
of BLANCHING PEAS

This machine is **different in principle and construction** from other machines, made to imitate it, in general outer appearance.

THE PLUMMER BLANCHER IS A TRIPLE MACHINE

It consists of **three** separate and distinct **tanks** and **three** separate and distinct conveyors—arranged tandem, with provision for transferring the peas from one tank to another and varying treatment of the peas in each tank—**This is important**—Read description **carefully** and don't let yourself be fooled into supposing that equally good results can be accomplished by the use of a single bath—it cannot be done.

If any pea packer is apparently satisfied with the results accomplished by use of a single tank machine, the case is simply that he does not know what can be accomplished and what the Plummer will do. The users of the Plummer Blancher will tell you the results of their experience with the Triple Tank Blancher, as compared with single bath treatment.

Remember the blanching is the most important operation in the entire process of packing peas—It can't be done any old way and get right results.

SPRAGUE CANNING MACHINERY CO.
DANIEL G. TRENCH & CO., General Agents
CHICAGO, ILL.

The Dodge Metallic Cap

NINE REASONS

for the use of this "Hermetic Seal," the simplest and handsomest and safest ever made.

Three Reasons for Packers:—1. It saves time and labor, which are money—big money in the busy season. 2. It saves the losses by breakage and spoiled goods—which are more money. 3. Its fine appearance increases the selling value of products. It gives the high-grade look, even to a low-price package.

Three Reasons for Dealers:—1. It does not leak. There are no wasted goods and no dissatisfied customers. 2. It does not rust. The packages are always clean, bright and inviting. 3. Customers buy with their eyes as well as with their appetites. They like a neat, artistic package.

Three Reasons for Consumers:—1. It is quickly and easily removed by the fingers—no prying or gouging with a knife or fork. 2. It avoids all cutting of hands and breaking of glass and soiling of tables and clothes. 3. After removal, the Cap is used for perfect covering.

No. 53 Cap comes assembled. The Dodge Capping Machine is a marvel of simplicity and accurate work.

THE DODGE METALLIC CAP COMPANY, Montclair, N. J.

BARGAINS

1 Crosby Lock Seamer, equipped for No. 2 and No. 3 standard cans.
1 Crosby Header for No. 2 standard cans.
1 Crosby Rotary Crimper for No. 2 and No. 3 cans.
1 Crosby Rotary Crimper for No. 2 and Gallon cans.
1 Utica Industrial Co. Header for No. 2 and No. 3 cans.
2 McDonald Testers for sizes up to gallons.
1 Ayars Automatic Tester for No. 2 and No. 3 cans.
1 Bliss No. 3 Press for gangs of dies.
1 Rotary Resin Pulverizer.
1 Fay & Scott End Soldering Machine.
3 Sprague Corn Cutters, 1893 model.
3 M. S. Corn Silkers.
2 Conant double filler corn Cookers.
1 Burnham double filler corn Cooker.
1 Huntley No. 6 Pea Grader.
1 Stevens foot power Tomato Filler.
1 Lockwood Carburetor.
1 12-H. P. Horizontal Engine.
1000 reams 10x14 Tissue Wrappers.
350 reams 12x16 Tissue Wrappers.
2 Knapp No. 2 Labeling Machines.
1 Model M. Sprague Corn Cutter.
1 Single Burnham Corn Cooker.
2 Huntley Monitor Bean Graders.
2 Monitor Bean Cutters.

ALL OF ABOVE IN FIRST CLASS CONDITION
PRICES AND TERMS ON APPLICATION

S. F. SHERMAN, Utica, N. Y.

THE BLAKESLEE

"Simplicity" Can Righting Machine

FOR USE WITH ALL FILLING MACHINES

THIS little machine will take rolling cans from a runway at the rate of over 100 per minute, no matter whether their open ends are turned in one direction or not, turn them right end up and deliver them all day to the can filler without making a mistake or becoming weary. It will do away with labor of one individual and will save three times its cost in one season. It will save wear and tear on the nerves of your Superintendent and make things go more smoothly about your factory. It has been thoroughly tested by a season of regular use.

FOR FURTHER PARTICULARS ADDRESS

Sprague Canning Machinery Co., AGENTS, Chicago

POPE

"Clean and Bright" Tin Plates

¶ Are manufactured in the most modern and completely equipped mill in the country.

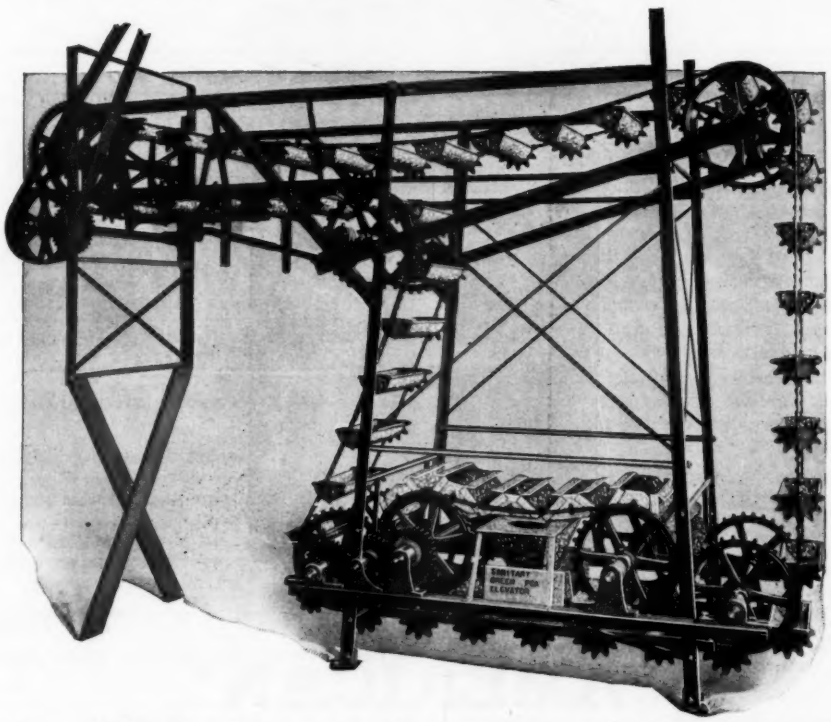
¶ Concentrating our efforts upon the manufacture of canning tin plates, it is reasonable to believe that we succeed in making the best.

¶ Whether you make or buy your cans, you will find them satisfactory if our plates are used in the making.

POPE TIN PLATE COMPANY
PITTSBURGH, PA.

WRITE US FOR REASONS

Sanitary Pea Conveyor



We have designed what we consider a very excellent Sanitary Pea Conveyor, of which above illustration shows the main features:

The Carrying Buckets (which are galvanized);

The Driving Mechanism;

Idlers (sprockets complete with shafts, boxes, etc.);

Feeding Mechanism (which is so arranged that peas dropped into a chute or hopper are discharged into buckets as the latter pass below this feeding mechanism, without any dropping or waste.)

The buckets are emptied by being tilted through contact of star projections on their end castings coming in contact with obstruction placed wherever desired.

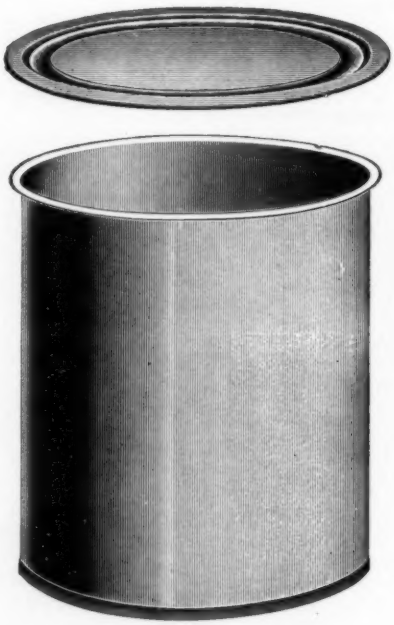
The Conveyor can be made to carry any distance in the factory between individual machines of a line. It will permit distribution in divided quantities in any manner desired. Its simple, durable and sanitary features recommend it highly and will no doubt appeal to you.

We beg that you will give more than passing attention to the study of the features of this Conveyor, and communicate with us if you desire further information.

Sprague Canning Machinery Company,

DANIEL G. TRENCH & CO., General Agents,

42 River Street, Chicago.



"AMERICAN"

OPEN-TOP LOCK-SEAM CANS

have all the solder and flux on the outside. We can furnish them either plain or enameled inside. In the enameled can no fruit comes into contact with the metal and there is

NO BURNED STREAK ON THE INSIDE

LET US TELL YOU WHY AND QUOTE YOU PRICES

American Can Company

NEW YORK BALTIMORE CHICAGO SAN FRANCISCO

THE CANNER

AND DRIED FRUIT PACKER

VOL. XXV. No. 3 CHICAGO, THURSDAY, AUGUST 1, 1907 WHOLE No. 653

THE CANNER

AND DRIED FRUIT PACKER

with which is incorporated TRENCH'S CANNERS' INDEX

PUBLISHED EVERY THURSDAY BY

THE CANNER PUBLISHING COMPANY.

22 East Randolph Street, CHICAGO

JAMES J. MULLIGAN, EDITOR

SUBSCRIPTION RATES

United States and Canada, one year..... $3.00
All Foreign, one year..... 5.00

Remittances may be made by Post Office Order, Registered Letter Check, Draft, Express Money Order, or Order on the House in Chicago with which the subscriber is doing business.

ADVERTISING

Advertising rates made known on application. Copy for and changes in advertisements must be in this office on Monday preceding the date of issue.

CORRESPONDENCE

Correspondence upon all subjects of interest to the trade is solicited Items of news, both personal and general are always interesting, and we wish each subscriber to assist in making *The Canner and Dried Fruit Packer* the newsiest journal in the trade.

In correspondence, writers will observe the following regulations: communications must always be accompanied with the writer's name, as no attention is paid to anonymous letters. A designating mark will be used where publicity is not desirable. We do not hold ourselves responsible for views of correspondents, but all interested are cordially invited to use our columns freely.

Literary contributions are invited from all interested in the advancement of the canning industry. Payments will be made for all special papers on practical, mechanical or scientific subjects of value to the industry which are accepted and published.

ENTERED AT THE CHICAGO POST-OFFICE AS SECOND-CLASS MATTER

A food law has been adopted for the Philippines without one-millionth of the fuss that preceded the enactment of the present federal food law.

* * *

Our advices indicate a smaller pea pack for Colorado than last year, which showed a large increase over the preceding year. Colorado was shown by THE CANNER's statistics, published following the last canned goods pack, to occupy sixth place among the pea-canning states.

* * *

The United States imported from Italy during the month of January, 1907, as declared in invoices at the Milan consulate, "tomato preserves" to the value of $14,019, a pretty large amount of business for one month only, in an article of that kind, especially as this country ought to be able to produce all the "tomato preserves" needed for its own people.

* * *

This statement is contained in the weekly circular of one of the largest Baltimore brokerage houses: "The strong upward movement in both spot and future corn is a genuine surprise, even to the I-told-you-so prophets." Perhaps the prophets will be able to regain whatever prestige they have lost by telling us what the corn market will be a year hence. It would be an interesting thing to know.

* * *

We give our unqualified indorsement to this assertion by the Chicago *Tribune:* "The only proper object of any state food law is to see that the people get what they pay for and get nothing injurious to health." Food legislation should not be carried beyond its legitimate object of affording protection to the public against deception through the purchase of inferior goods and making it impossible to obtain an article of food containing a substance liable to damage the health of the consumer.

* * *

It's difficult to please everybody. The benzoate question is nearer settlement than it has ever been, yet along comes a grocery trade paper and asks if so important a matter as that of the safety of benzoate of soda ought not to have been settled long ago by the authorities? The authorities seem to be approaching a final determination as regards the use of benzoate of soda in food products about as rapidly as is possible to do and at the same time give proper consideration to the interests which would be affected by a ruling prohibiting its use.

* * *

The reports by the mercantile agencies are favorable in tone. Dun's report on general business says, for instance, that "It is still noteworthy that there is practically none of the customary complaint of midsummer dullness in commercial and industrial channels." Bradstreet's weekly review of the trade situation says that "High temperatures have stimulated crop developments as a whole, helped retail trade in light summer wear goods, and improved reorder business for the latter with jobbers, all these influences favoring some growth of the feeling that early poor starts in crops and trade have been largely made up for." Commenting on conditions in the Chicago district, Dun's says: "Increasing accessions appear in the numbers of visiting buyers and their operations in staples compare favorably with a year ago. Notwithstanding the increased failures in this district, mercantile collections in the western states leave little room for complaint and credits generally maintain a satisfactory position."

CONTINENTAL CAN COMPANY

DIRECTORS:
T. G. CRANWELL, Pres't.
A. W. NORTON, Vice-Pres't.
F. P. ASSMANN, Sec'y & Treas.
J. C. TALIAFERRO.
B. H. LARKIN.

C. A. SUYDAM, Sales Agent

FACTORIES:
CHICAGO
SYRACUSE
BALTIMORE

TO THE CANNING TRADE:

During the rush of the season you want shipments, not promises. Those who have contracts placed with us have only to indicate their necessities and we will give them the best of service at all times.

We very cordially invite those who have purchased elsewhere to give us a trial shipment in the rush season and let us demonstrate to them how we handle "hurry up" orders.

Our three factories, one each at Chicago, Baltimore and Syracuse, make our capacity large and flexible and we are able to take care of all orders in the best possible manner.

Awaiting your commands, we are

Yours very truly,

CONTINENTAL CAN COMPANY.

THOMAS G. CRANWELL, President.

Uniform State Food Laws.

UNIFORM food laws is made the subject of an editorial in the Chicago "Tribune," suggested by the annual meeting of the National Association of State and National Food Departments at the Jamestown Exposition last week. The "Tribune" is one of the newspapers which have devoted a good deal of space to discussion of food legislation, but its knowledge of the progress that has been made within the past year toward uniformity of state laws isn't by any means perfect, while it doesn't credit the members of the association referred to with having accomplished much toward making our state laws uniform, for regarding them it says: "They cannot be credited with any great progress toward securing uniformity in state laws, although that is the nominal reason for their organization."

The organization of food department officials has exerted an influence on state food legislation, but the bulk of the credit for what has been accomplished toward harmonizing the laws of the different states and of the United States is due the National Wholesale Grocers' Association and its chief counsel, Wm. C. Breed. Most of the food laws enacted and amended during the past winter and spring were passed or amended because such action was urged by the wholesalers' organization. However, we do not know that the association in question was organized to secure food law uniformity.

The "Tribune" suggests that "In default of any better plan of securing uniformity an agitation to secure the enactment in each state of a statute exactly like the federal statute would be a step in the right direction." This idea is an excellent one, but the "Tribune" is a little late in advancing it. A movement to secure the adoption by the legislature of each state of laws in all essentials like the federal food law was inaugurated last winter, and so vigorously and successfully were the merits of the bills and the idea of uniformity of the food laws urged upon the law-makers that a dozen or more states passed the measures practically as presented. We already have uniform food laws in a considerable number of states, and as it is the intention to present similar bills in the legislatures that will convene next winter, there is little doubt that uniformity will continue to extend over more and more of the territory of the United States, while there seems a very good prospect that eventually there will be little or no important conflict in any direction in laws to regulate the manufacture and sale of food.

More Millions to Feed.

THERE never was such a demand for food in this country as during the first six months of 1907. The whole nation seemed hungry and the facilities of food packers and distributers were taxed to the limit to satisfy the millions who clamored to be fed. Not all of this tremendous demand was a consequence of the backwardness of the season, which cut down the supply of early vegetables and fruits. Much of it was due to our prosperous condition, to our wonderful ability to buy, but undoubtedly the rapid growth of population in the United States is responsible for a considerable share of this really unprecedented demand.

Population has increased very rapidly in the last several years, and will continue to gain at an equal, if not a greater, rate during the next several. The population of the United States in 1906 has been estimated by the Census Bureau at about 84,000,000. This does not include "outlying territory," which brings the total up to over 93,000,000. A forecast for 1910 indicates a grand total of 99,000,000, or 89,000,000 continental United States and Alaska. As a partial basis for its estimates the Census Bureau has used the interdecennial censuses of fourteen states, most of which were taken in 1905. Bulletin 71 has been issued by the Bureau of the Census to present in some detail the interdecennial population of the fourteen states in which such a census has been taken, adding condensed estimates for all the states for the year 1906, and, in addition population figures for 1890, 1900, 1904, 1903 and 1906, of all the incorporated places having 8,000 population or more in 1900. The estimated population in 1906 of all incorporated places having in 1900 a population of 8,000 and over aggregates 28,466,624, as compared with 18,958,522 and 24,399,697 reported by the Federal census of 1890 and 1900 respectively.

No American industry will reap greater benefit from the larger population this country will hold in another five or six years than the food-packing industry. There will be more millions to be fed, and there will also be, on account of the growing appreciation of canned goods, an increased per capita consumption of this class of food.

Nebraska Food Law in Effect.

The pure food law has now been in operation in Nebraska for more than a week. It has not been recorded so far that serious infractions of the law have been discovered, neither has any part of the pure food law been dragged before the courts for interpretation. It is most likely that the pure food commission will issue regulations covering points that may be in dispute and that the jobbers and retailers will abide by these instead of any literal interpretation of the law passed by the last legislature.—Omaha Trade Exhibit.

R. H. GRINSTEAD & COMPANY
Packers' Agents and Brokers in **CANNED GOODS AND DRIED FRUITS**
LOUISVILLE, KENTUCKY
CORRESPONDENCE SOLICITED FROM BUYERS AND SELLERS
References—Union National Bank. All Jobbers in Louisville
Members of the National Canned Goods and Dried Fruit Brokers' Association.

DO YOU WANT A GOOD PRICE FOR YOUR TOMATOES?

If so you must can them as near *whole* as possible. Do not use the old style peeling knife to core with. By so doing you open the seed cells, waste the tomato and do a very poor job of coring.

THE EBY TOMATO CORER

cuts out *any size* core, saves the fruit and does the work neatly and *fast*. Canners that used Eby corers last season are ordering more this season.

Price per dozen, - - $5.00
Price for one by mail, post-paid, .50

FOR SALE BY
P. J. EBY
TROTWOOD, - - - OHIO

CANNED GOODS MARKET

The tomato and corn crops, speaking generally, have made progress during the week under review, but both remain backward and canning of these two leading lines will not commence until later than usual, enough later to make it very important that frost hold off until quite late. We consider it worthy of mention that most crop advices speak much more encouragingly of the condition of tomatoes than of the corn crop, which is described by quite a number as doing very poorly, being in some places very uneven and small. In THE CANNER'S correspondence columns this week are a number of late reports on crop conditions in important canning sections.

A private advice from Wisconsin says that the indications are that the crop of early June peas over the state will be good, but that the sweet peas will be short.

A second private advice from Wisconsin is to the effect that the early Alaska peas yielded well, but says the later peas of this variety dwindled considerably, for which the cold, late and wet spring was blamed. This advice states that sweet peas are looking well and that a good yield of these varieties will bring up the average pack for the state.

The following table shows comparative packs of the half dozen leading pea-canning states:

	1905.	1906.	Inc.	Dec.	Pct.
Wisconsin	1,853,786	1,409,497	555,711	.....	65
New York	1,103,871	1,314,832	210,961	.....	20
Indiana	369,585	364,085	.....	5,500	1.5
Maryland	415,073	333,590	.....	81,483	20
Michigan	246,981	342,901	95,920	.....	39
Colo., Idaho, Utah and S. Dak.....	115,250	268,500	153,250	.....	133
	3,104,546	4,033,405			
Total U. S. pack.	3,577,602	4,577,767			
Difference between total U. S. pack..	473,056	544,362			

The above table shows that the six leading pea-packing states put up in 1905 within 473,056 cases of the entire quantity of peas canned that year in the whole United States, and the same states within 544,362 cases of the total canned pea output of the country in the season following, or in 1906, a year in which the United States made an increase of 1,000,165 cases, or 27 per cent, in the pea pack. It is easily seen, then, that the outcome of the present season in these half dozen states will show pretty accurately the outcome of packing over the entire country since the final figures aren't likely to show any material changes in the relative rank of the principal states, and that 928,859 cases of the 1,000,165 net increase in 1906 were packed in the states named in the table.

Tomatoes—

Future western standard No. 3 tomatoes are offered at 87½c., factory, and the offerings are somewhat freer on account of large acreage and favorable crop outlook over the country. Spot tomatoes were offered this week down to 97½c., Chicago. The range is 97½c. to $1.00, delivered, with little business. The first run of the season on tomatoes by a Baltimore factory was made last week, on July 23, the stock coming from Virginia. A very small per centage of the Baltimore pack will be made, however, before Sept. 1. Our advices from Maryland, Delaware and New Jersey indicate favorable crop conditions. The expectation is for a large yield on the Maryland and Delaware peninsula.

Corn—

The news regarding the sweet corn crop is of a character that strengthens the feeling, which is better on 1907 packing. The cheapest offering in western futures we can hear of now is 60c., factory, standard grade; 62½c., factory, is the lowest on Illinois corn. Jobbers appear to be taking more interest. Spot corn is quiet here, without new features. Interesting reports on crop conditions will be found in our correspondence columns this issue.

Peas—

Buyers in Chicago are looking for fancy grades of peas. The fine qualities are in demand, while jobbers are awaiting deliveries of standards bought on future contracts. In Wisconsin the packing season is drawing to a close and in a short time the question of the size and quality of that important state's pack will be settled. Complaint of poor quality of the Alaska pack is general.

Asparagus—

Asparagus is firm and offerings are limited to small lots and firm prices in most instances. Practically all holders are firm in their views and the shortage of the output is responsible for the tenacity with which they mention prices.

Sardines—

Domestic sardines are firmly held and are in good demand. The catch along the Maine coast is reported slightly better, though still light.

Salmon—

Spot red Alaska salmon is firm, holders being really firmer in their views. In future red Alaska talls little is doing, owing to the fact that the Alaska Packers' association has not yet named prices. There have been reports of outside packers here and there seeking business on a guarantee of 2½c below the association basis, when named. We have heard reported from the coast a future quotation of 80c f. o. b. on pinks. Advices say that the run of chinooks on the Columbia river continues light.

The Corby Commission Co. of New York, Eastern Agents for the Kelley-Clarke Co. and selling agents for the Columbia River Packers' Association, say in a special circular: "Reports from Puget Sound indicate, up to the present time, a very short pack of Sockeye Salmon; and it is freely predicted that this, being the second year after the big run of 1905, will be the smallest of the four years' cycle unless all signs fail. Should this prove to be true, on extraordinary demand will fall upon Alaska Salmon, particularly Standard Red, the sales of which, during the past year, have been phenomenal and have exceeded in the United States those of any other year since the packing of salmon became a recognized industry. So far as cheap salmon is concerned, Chums have been very largely oversold; and there is every indication that pro rata deliveries will rule when the time comes for shipment. Pinks at 80 cents f. o. b. Coast have sold freely; and it is generally believed that when prices open up for the season of 1907, 85 cents per dozen at least will prevail."

PICKLES AND KRAUT.

F. A. Waidner Co., selling agents of the Western Pickle Association, say regarding the pickle situation: "To begin with, the acreage of cucumbers contracted this season is below the average. The high prices realized for other farm products made the figures offered by packers look too cheap to the grower. Unfavorable weather, bugs, cutworms, etc., knocked out fifteen to twenty-five per cent of the crop, making the acreage planted entirely too small to supply the ordinary demand. In a large growing section one-fourth to one-half of the stand on the bottom lands has been washed out by rains. Last year at this time there was an immense quantity

READY FOR USE **COOKED FLOUR PASTE** SPECIALLY PREPARED FOR CANNERS AND PACKERS

¶ We supply more paste to canners and packers than any other two paste makers. ¶ Goods always give satisfaction. Prompt shipment. Full weight, 250 lbs. net, gross weight, 270 lbs. per barrel. Good clean barrels. Paste will keep for a long time without moulding or souring.

$1.50 PER BARREL F. O. B. CHICAGO

ESTABLISHED 1891. CHICAGO PASTE FACTORY 127 INDIANA STREET, CHICAGO.

The Virginia Can Company

BUCHANAN, VIRGINIA

The Packing Season is

NEAR AT HAND

Packers who have not bought should

ORDER AT ONCE

and escape the danger of being caught without Cans during the season.

We can now accept a few orders for

IMMEDIATE SHIPMENT

Write, or wire, us for terms and full information.

Virginia Can Company

BUCHANAN, VIRGINIA

O. C. HUFFMAN, President.

of reserve stock in tanks to begin the new season; this year the heavy summer trade will clean up everything before new crop is cured out fit to use. There will be great delay in filling fall orders and packers are likely to be eight to ten weeks late in delivery. Better order for September shipment if you want pickles for Tranksgiving day. Present prices of vinegar pickles are too low, the condition of the crop will make higher prices inevitable."

CANNERS' SUPPLIES

Cans—

There have been no changes in quotations on packers' cans during the past week. The prices remain as quoted in THE CANNER the last several weeks. We repeat them below as quoted by the leading manufacturers.

The American Can Co. quotes for delivery during the packing season of 1907:

	Per 1,000.
Standard No. 1 cans 1⅜ inch opening	$10.30
Standard No. 2 cans 1⅜ inch opening	14.25
Standard No. 2 cans 2 1-16 inch opening	14.75
Standard No. 2½ cans 2 1-16 inch opening	18.25
Standard No. 3 cans 2 1-16 inch opening	19.00
Standard No. 10 cans 2¼ inch opening	46.00

The Wheeling Can Co. quotes for delivery during the packing season of 1907:

	Per M.
No. 1s	$10.30
No. 2s	14.25
No. 2½s	18.25
No. 3s	19.00
No. 10s	46.00

The Continental Can Co. quotes the following prices for delivery from March to September:

	Per M.
No. 1s	$10.30
No. 2s	14.25
No. 2½s	18.25
No. 3s	19.00
No. 10s	46.00

Standard openings, usual difference (50c) per thousand, for each larger size opening.

Solder hemmed caps:

	Per M.
1⅜ inch opening	$1.00
2 1-16 inch opening	1.45
2 7-16 inch opening	1.90

The Sanitary Can Co. have made prices on cans for 1907 as follows:

	Per M.	
	Plain.	Enamel.
No. 1	$12.00	$15.00
No. 2	16.50	20.00
No. 2½	21.00	25.00
No. 3, 4⅞-inch	22.00	26.50
No. 3, 5-inch	22.50	27.00
No. 3, 5½-inch	25.00	.....
No. 10	47.50	57.50

The Virginia Can Co., Buchanan, Va., quotes for season delivery as follows:

	Per M.
No. 2 cans, 2 1-6 opening	$14.75
No. 3 cans, 2 1-16 opening	$19.00

Tin Plates—

Nothing worthy of special note has occurred in this market during the week. Prices unchanged, being as follows f. o. b. mill:

BESSEMER STEEL COKES.

14 by 20 (107 lbs.)	$4.05
14 by 20 (100 lbs.)	3.90
14 by 20 (95 lbs.)	3.85
14 by 20 (90 lbs.)	3.80

Usual differentials for odd sizes, etc.

Pig Tin—

An effort was made during the early part of the week to maintain prices, but in face of a very light demand, and several cargoes to arrive within a few days, the effort failed, and the market has declined. We quote as follows f. o. b. New York:

	Spot.	August.
5 to 15 ton lots	$40.55	$40.35
1 to 5 ton lots	41.00	.....

15 to 25 ton lots, cash against documents, about five points lower.

Sulphur in California Cured Fruit.

W. M. Griffin of the Griffin & Skelley Company, the well known California cured fruit packers, was in Washington some days since conferring with members of the Food Inspection Board in regard to the use of sulphur in cured fruits, and it is understood that his representations on this subject were productive of good results.

It seems that the officials at Washington gave Mr. Griffin a written statement of the government's position regarding the sulphur question, and in this statement was the declaration that in the execution of the pure food law the policy of the government is to protect the consumer with as little hardship as possible to the honest producer and dealer. The government would not recede from its insistence that less sulphur be used in fruit-curing processes, and it is hinted that the officials succeeded in convincing Mr. Griffin that average California cured fruits contain sulphur in larger quantities than is necessary.

Improved Quality of Food Sold in Indiana.

A recently issued bulletin of the Indiana State Board of Health shows that very satisfactory progress has been made in general food conditions, so far as adulterations go, in the yast two years.

Figures, made up from all the analyses covering the six months ending June 1, 1907, show that the percentage of adulterated products analysed in that period was only 16.4, or about one-1ourth of what the adulteration percentage was two years ago. Practically the same products were examined then as now. The total number of food products was 724, of which 120 were found to be adulterated.

Broker Seeks Sales Agency.

An active eastern broker, with practical experience in every department of the canning business, desires to move west, and would like to be associated with some large canning company as general sales agent. References among packers,, brokers and jobbers. Commission arrangement preferred. Address, "Brokerage," care THE CANNER.

SECOND-HAND MACHINERY.

People who want to buy second-hand canning machinery use CANNER Want Ads, knowing that practically every large packer looks over this department every week.

CENTRAL BROKERAGE COMPANY

ROOM 1010, 105 HUDSON ST., NEW YORK CITY — MASONIC TEMPLE, CHICAGO

MERCHANDISE BROKERS

LIBERAL ADVANCES ON CONSIGNMENTS

CORRESPONDENCE

MISSOURI.

Glasgow, Mo., July 26, 1907.

EDITOR CANNER.—We find we have about the same number of acres as last year. We expect to have a larger pack than last year, as the tomatoes are farther advanced.

GLASGOW CANNING CO.

ILLINOIS.

Chillicothe, Ill., July 29, 1907.

EDITOR CANNER.—Corn at present is looking fine; acreage is the same as last year. Corn will come in about two weeks late.

CHILLICOTHE CANNING CO.

—

Eureka, Ill., July 29, 1907.

EDITOR CANNER.—Our prospects for corn are much better than a month ago. The warm, moist weather of the past four weeks has forced the corn considerably, but it is hampered by weeds, as we were unable to get into our fields for over a week.

With proper weather from now on we anticipate an average yield. We think probably the acreage and yield this year will be slightly in excess of 1906.

DICKINSON & CO.

—

Bloomington, Ill., July 30, 1907.

EDITOR CANNER:—During July we have had plenty of rain and hot weather. This has improved prospect for corn very much and makes up, in part, for late planting season. With ordinary "corn weather" during August we expect to be in position to fill our future orders in full, as usual.

BLOOMINGTON CANNING CO.

IOWA.

Waverly, Ia., July 29, 1907.

EDITOR CANNER.—The weather last week was fine for corn. We will have a good crop if frost stays off until September 20. We expect a large pack.

KELLEY CANNING CO.

—

Cedar Rapids, Ia., July 30, 1907.

EDITOR CANNER:—Corn conditions here are about the worst we have known in five years. We estimate about 60% of a crop. Have had a great deal of rain and many fields have been too wet to cultivate. Are having good weather now, and corn is growing fast. Acreage a little less than last year.

CEDAR RAPIDS CANNING CO.

COLORADO.

Longmont, Colo., July 23, 1907.

EDITOR CANNER.—We have packed about two-thirds of our crop to date, but the weather now is extremely hot, and unless there is a change within a day or two the other third will be practically worthless.

Under normal conditions our pack would be heavier than last year, but as it is, we cannot tell whether we will exceed it or not. Last year was also a short pack.

Tomatoes have been damaged twice by hail, and there will not be to exceed fifty per cent of a crop in this State unless we have a late fall.

THE EMPSON PACKING CO.

NEW YORK.

Franklinville, N. Y., July 27, 1907.

EDITOR CANNER.—Acreage corn reduced to start with 25 to 30 per cent; acreage reduced on account of unfavorable weather, 25 per cent. The crop is about three weeks late, is uneven and looks bad. It will need all of September and half of October to get one-half of an average crop. We can-

TRADE MARK **DIAGRAPH** REGISTERED

THE IMPROVED

STENCIL CUTTING MACHINE

ENDORSED BY USERS EVERYWHERE!

McCORD-BRADY CO., Omaha, Neb.

Jan. 21, 1907.

"After giving it a fair test in our shipping room, we have decided it is far superior to any machine we have ever seen or used."

THE RIGGS COMPANY, Wellsville, O.

Feb. 17, 1906.

"In mailing you our check for the Diagraph recently shipped us, we wish to express our satisfaction with the machine. It is so simple a child could operate it, and packages marked with these stencils certainly present a nice appearance. We find it very convenient for cutting other stencils as well as those for shipment."

WM. GRECHT CO., Baltimore, Md.

May 8, 1907.

"We find it is all you claimed it to be when we purchased it. It makes a neat stencil, nothing has gotten out of order, and we are very well satisfied with our purchase."

NATIONAL ENAMELING & STAMPING CO., Granite City, Ill.

April 22, 1907.

"It is far superior to any other stencil machine we have ever used."

GREEN VALLEY CANNING CO., Graton, Cal.

Jan. 19. 1907.

"It saves time and money."

KEMP, DAY & CO., New York City, N. Y.

Jan. 7, 1907.

"Have been using the Diagraph for the past two years and can highly recommend it. It has been in constant use daily, and is without a blemish and it works perfectly."

Write for free booklet explaining the Diagraph and our "No Error" system of shipping.

AMERICAN DIAGRAPH COMPANY

24 N. Second Street, ST. LOUIS, U. S. A.

not expect over one-half crop under favorable conditions from now on.

FRANKLINVILLE CANNING CO.

—

Mexico, N. Y., July 29, 1907.

EDITOR CANNER:—Corn crop will be average if not frost before September 20th. If frost occurs before that date it will not be a half crop.

WILSON CANNING CO.

DELAWARE.

Willow Grove, Del., July 25, 1907.

EDITOR CANNER.—There is about twenty-five per cent more acreage in tomatoes here than last year. If the frost stays off until late there will be a fair pack. We cannot tell as to what the pack will be, for the season has all to do with it.

J. COLBY SMITH & SON.

—

Woodside, Del., July 27, 1907.

EDITOR CANNER.—The tomato acreage in Kent County, Delaware, is larger than in 1906. The condition is now fine; set late, yield depending on late fall. There is a probability of as large a pack as in 1906 in that case.

SAMUEL H. DERBY & CO.

MARYLAND.

Goldsboro, Md., July 26, 1907.

EDITOR CANNER.—The tomato acreage is larger than last year; crop will commence to come in ten days later than usual. If we have an early frost there will be a very light pack; with a late frost there may be a fair pack.

R. JARRELL.

—

Bivalve, Md., July 27, 1907.

EDITOR CANNER.—Tomato outlook through this locality is fairly good. We are anticipating a much larger pack this year than last.

GEO. D. INSLEY & SON.

OHIO.

Mt. Washington, O., July 26, 1907.

EDITOR CANNER.—At the present time the outlook is favorable for a large pack.

A. W. COLTER CANNING CO.

—

Continental, O., July 27, 1907.

EDITOR CANNER.—Tomato prospects in this locality are very promising for a good crop. Corn is rather late and considerably damaged by recent rains.

CONTINENTAL CANNING CO.

—

Willshire, O., July 29, 1907.

EDITOR CANNER.—Corn and tomato conditions in our territory are from middling to poor.

WILLSHIRE CANNING CO.

—

Fayette, O., July 29, 1907.

EDITOR CANNER.—We have out our full acreage of corn and tomatoes, but the season is very late, and the prospect not very encouraging. At the best it will not average over 50 per cent for either crop.

FAYETTE CANNING CO.

—

Ashville, O., July 29, 1907.

EDITOR CANNER.—We do not consider there will be 50 per cent of the corn packed in this section there was in 1906, only a few factories operating.

SCIOTO CANNING CO.

—

Cleveland, O., July 30, 1907.

EDITOR CANNER:—Corn in Western New York: condition of crop 60%; weather good. We will probably pack less than last season.

HASEROT CANNERIES CO.

WISCONSIN.

Sturgeon Bay, Wis., July 29, 1907.

EDITOR CANNER:—Late peas are looking better than usual at this season of year. Yield per acre of first half our pack varies but little from that of 1906.

REYNOLDS PRESERVING CO.

MINNESOTA.

Faribault, Minn., July 29, 1907.

EDITOR CANNER;—The corn crop is fair and expect to put up about same amount as last season.

FARIBAULT CANNING CO.

MAINE.

Corinna, Me., July 29, 1907.

EDITOR CANNER:—Weather past two weeks favorable, corn growing fast and looks well. The only trouble is crop is two to three weeks late; what yield will be depends on how late frost holds off. We will have smaller pack than last year, acreage being less.

NORTHERN MAINE PACKING CO.

—

Portland, Me., July 29, 1907.

EDITOR CANNER:—Corn has advanced rapidly, but is still later than usual, and uneven—some pieces very good, other poor. Given eight weeks of such weather as July has been we shall have an average crop on a reduced acreage.

MONMOUTH CANNING CO.

—

Portland, Me., July 29, 1907.

EDITOR CANNER:—Too early to make predictions about the size of pack in this part of the country. Corn looks well, but is backward in most parts of state.

SACO VALLEY CANNING CO.

GOOD PROCESSORS.

Good processors not yet employed are advertising in THE CANNER'S Want Ads. Read 'em.

FRONT

Allison's Character Numerals

FOR USE OF PACKERS AND CANNERS IN CUTTING IDENTIFICATION OR TRADE MARK NUMBERS ON END OF LABELS

This System identifies your goods and the year packed.

Identification number cut from 500 labels at one operation of the machine without separating or disarranging packages.

Each purchaser given registration certificate, registering him under the number which his machine cuts, and protected under the patent against duplication.

Separate character cut in connection with registration number to identify year in which goods were packed.

Characters can all be hidden, or exposed, at option of purchaser.

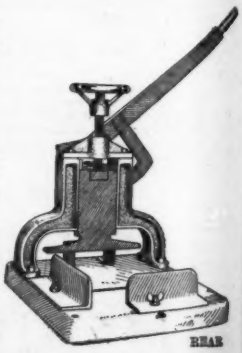
Packers can safely guarantee goods under buyers' labels, as well as their own, as identification is positive.

Weight of Machine 120 lbs., shipping weight 135 lbs.

Price, including registration certificates and duplicate set of cutting dies, is $80.00 f. o. b. Chicago, Ill., or Des Moines, Iowa.

For particulars address,

H. H. ALLISON, Sac City, Iowa.



REAR

(PATENT APPLIED FOR)

SEATTLE.

Seattle, Wash., July 27, 1907.

EDITOR CANNER.—Alaska cannerymen are awaiting with interest the naming of prices on the 1907 pack of red Alaska salmon by the association. This big firm operates a large number of canneries in the North and its pack is so large that it is in position to regulate prices during the early part of the season at least, although it is not in strong enough position to entirely control things. Still, with half of the Alaska pack in its possession, it can virtually say what the price is going to be during the early part of the season at least. Its disposition, however, is to bull the market, as it is as much to its own advantage to keep prices up as it is to the advantage of the other packers.

It is nearly time that now that association should be making an announcement of opening prices. It is likely that they are holding back as much as possible, until they receive more complete details regarding the size of the pack of their different plants. Advices from the North state that the run of salmon has not been holding out as satisfactorily as it did earlier in the season. The run of late has been very poor, and if it should not improve before the end of the season, there will be a short pack. Naturally, if there is to be a short pack, the cannerymen want to know it before they make any definite prices on this pack.

There is every probability in the face of conditions now prevailing that the price named on Red Alaskas will be the highest for several years. With the prospect of a possible short pack, and the fact that present stocks are well cleaned up, such a price is justified. The brokers of the Alaska Packers' Association inform your correspondent that all of the firm's stocks of Alaska Red salmon have been exhausted and none will be available from the present time until the first of November. The last sale made by these brokers was a small amount of the "Argo" brand which brought $1.15 a dozen. The nominal price at present is said to be between $1.15 and $1.17½ per dozen. It is reported that several thousand cases have been shipped from Europe back to the United States to supply the shortage in the supply in the Atlantic seaboard cities.

SOCKEYE.

BALTIMORE.

Baltimore, Md., July 29, 1907.

EDITOR CANNER.—Nothing has transpired during the past week to cause me to change the statement I previously made that string beans and blackberries would have to be added to the "short pack" list. This list is getting to be of a formidable size, as it now comprises pineapples, strawberries, raspberries, blackberries, gooseberries, spinach and string beans. I have not mentioned cherries in the foregoing list, as it would be wrong to say that there was a short pack of cherries, because as a matter of fact, there was no pack at all, the crop being an entire failure.

It will be seen, therefore, that the short pack list covers nearly everything that has been packed in this section up to the present, as the only other two lines that have been handled are peas and beets. Of the first mentioned, the Baltimore pack is larger than that of last year, but it is below the average of the Baltimore pack of several years ago. The continued reports of short pack of peas in New York State and the West have had the effect of increasing the demand in Baltimore, especially for seconds and cheap standards. There is a wide range in quotations here, some seconds being offered as low as 75c per dozen, whereas others are held at 90c. Some standards are offered at 90c, and others at $1.05. It all depends on the quality. Some of the seconds offered at 75c are not much better than some soaks. The only way to buy peas is to see samples of the actual goods.

The weather continued very good during the week. This is improving the outlook for the coming crops of corn and tomatoes. Spot corn continues quite firm, in spite of the improved outlook for the new pack, and up to the present there seems to be no easing off in the market for future corn. I do not look for any lower prices on this line. Corn has been selling below cost for so long that now that it has advanced it has only about reached a figure that will give the packer his reasonable margin of profit. The old stocks of corn are reduced to a point that will only about show sufficient stock to supply the demand until the new crop comes in, and as it seems to be a foregone conclusion that the 1907 pack cannot possibly reach the average of the last three years, a continued firm market through the balance of this year is practically a dead certainty.

In tomatoes, however, the situation is different. Old goods keep cropping up here and there, and some have been sold as low as 87½c per dozen. The market for futures continues nominally at 85c, with an odd car now and then obtainable at 82½c. If the weather continues as favorable for tomatoes all through the balance of the season as it has been during the last two or three weeks, and the frost holds off until the first or second week in October, then we will have a large pack, and no trouble to buy at 80c to 82½c. Some tomatoes were packed in Baltimore last week, but were put chiefly in No. 2 cans, and were sold at 75c for seconds and 82½c to 85c for standards.

Some peach packing was also done last week, but at extremely high prices for raw stock. The fruit is coming in from Georgia, and is bringing prices that equal $1.00 to $1.15 for the ordinary 4/8 bu. peach basket. Those packers who are not setting the goods on one side to fill their orders for futures are quoting new packed goods at $1.10 for No. 2 second yellows, and $1.45 to $1.50 for No. 3. Standards are offered at $1.40 for No. 2 and $1.75 for No. 3. Strange to say, the trade seem to be taking hold even at these exceptionally high prices, and that being the case, it will have the effect of causing packers to take in all the fruit as soon as it reaches here without allowing it to pile up and cause a break in the market. The situation is tough for those packers who sold futures on the basis of $1.15 for No. 3 second yellows.

It is somewhat amusing to hear some of the remarks that are made as to the action of the grocers' convention held here recently, in which it was suggested to the membership that they ought to contract for futures another season, insisting that packers give them 100 per cent delivery contract. As I said in my last, the packers will have a word or two to say about that subject. From the packers' standpoint, it could not have come up at a better time. The question may as well be brought to an issue before next spring, and with the experiences of the last two or three years fresh in the minds of the packers, they will doubtless be well prepared to meet the issue. It is more than likely that the Southern jobbers will find that this resolution of theirs will act as a sort of boomerang, for there is no doubt in my mind but what most packers will want a change in their future contracts next year. Some of them are already saying that no matter what others may do they will only sell on a "subject to if packed" or pro rata contract, or else not accept any business.

Raw string beans continued very high all through the week, and the first crop is now about over. The market for the canned article remains at 67½c to 70c for No. 2 and $2.50 to $2.60 for No. 10. Should the second crop not turn out to be any larger than the first, then an exceedingly high market on canned string beans will be in effect all through the winter.

This market is now bare of the following old goods: Pears, apples, okra and tomatoes, sweet potatoes. It is also nearly bare on sauerkraut, oysters, corn and tomatoes. Of the new pack, both pineapples and strawberries are being rapidly depleted, and the market on both lines is advancing. Pineapples advanced from 10c to 15c per dozen during last week.

TARTAR.

PITTSBURG.

Pittsburg, Pa., July 29, 1907.

EDITOR CANNER.—The past week has developed nothing extraordinary in the canned goods situation. Spot tomatoes have continued to show weakness, though buying has been too regular to permit any sudden slump. Standard 3s may be bought freely around 90c f. o. b. factory, Maryland, while some 1905 goods claimed to be standards are being offered at 87½c per dozen.

Future tomatoes are apparently of no interest to the buyer. Prices remain at about 65 to 67½c for 2s and 85c for 3s f. o. b., with practically no buyers in this market. There is a feeling among the jobbers here that after the futures already sold are delivered the market will naturally decline to at least 82½c and perhaps a little lower, and they are therefore holding off for the drop.

Corn is rather at a standstill, offered freely enough but at strong figures. Interest in peas has been shifted from the purchasing agent to the receiving clerk. Small fruits are coming in for a little interest, and prices show an upward tendency. Pineapple, too, is in strong position. There is some demand for string beans, but the sudden and unexpected rise in price has inclined a good many of the buyers to await the Fall packing.

There is a general discontent over the high prices; every item, with very few exceptions, is showing great and increasing strength. There have been times when one or two individual lines took matters in their own hands and broke a few records for high prices, but this year food products, in fact all commodities, seem to have formed a "Union for the prevention of low prices," which has compelled the buyer to move with more than ordinary caution and to resort to "hand to mouth" methods, which will probably show a normal aggregate, but which, for the time being, cannot but give business a "draggy" tone.

F. C. WHEELER, JR.

PORTLAND.

Portland, Maine, July 29, 1907.

EDITOR CANNER.—The past week has been what the "down-east" farmers call "growing weather." Plenty of sunshine, and plenty of showers, have combined to bring about good results. That there has been, perhaps, too much of the shower business in some sections, is manifest, for evidently some of our friends from the West brought with them a few cyclones. A slight damage in a few sections to corn and apples occurred, but hardly enough to be mentioned. Now, notwithstanding the fact of very favorable weather at present, the danger from early frost, the season being late, must not be overlooked, nor the shortage in acreage.

At present, after the sharp demand of two weeks or so ago, the market remains quiet, but is very strong. But little spot is being offered, and few, if any, futures. No doubt there will be some, but not nearly as much as buyers think. To my mind the market next spring will be higher unless a stagnation of general business appears.

The demand for spot gallon apples is now with us, but much belated. Prices remain at $2.50 generally, but some have been held for $2.75, with no buyers. Future No. 10 or gallons have been sold in car lots at $2.25 to $2.35 delivered Portland and Boston. But few are now offered, for there will not be an average crop, I think.

The demand for spot and future blueberries is with us, but none can be bought; this is the whole story. The great shortage in lobsters is now apparent, and the calls are many. Nearly everything is taken as fast as offered. All the spring pack of clams has gone into dealers' hands, and they want more. Several carloads of next fall pack are reported as sold, but I do not vouch for it as a fact. Not a fish-packing house is running—a remarkable thing—but they have no fish to pack.

INDEX.

NEW YORK.

New York, July 27, 1907.

EDITOR CANNER.—There is an advance in the Singapore pineapple market since our last report, but the goods still remain on a very low basis, with the demand very heavy, undoubtedly a result of the high prices of other canned fruits this season, naturally creating an extraordinary demand for the one cheap fruit on the market, Singapore pineapple.

THE PAUL TAYLOR BROWN CO.

New York, July 29, 1907.

EDITOR CANNER.—Trade during the week has been rather inactive and business has been confined in substantially all instances to the actual requirements of dealers. The feature, if anything approaching a feature has developed, has been the easier situation in spot tomatoes. Other varieties of canned goods have about held their own with reference to prices, though in numerous instances holders intimated that they would sell at reduced quotations, if opportunity offered.

The tone on spot tomatoes was easier and holders of the few lots of old stock now obtainable are manifesting a freer selling disposition. Full standard Maryland 3s are quoted freely at 92½c here. Little interest is shown in jobbing quarters and in some instances jobbers have offered at the same price and terms. Full standard 2s, which have been represented as scarce, are reported as easy, though the change is less marked than it is in the case of 3s. Gallons can be bought at $3.75 delivered, and larger lots appear to be available than was the case last week. Futures are easy on the basis of 85c f. o. b. factory. Little buying of futures is noted. All brokers are receiving reports of improved crop prospects, and that, in a measure, is responsible for the easier feeling in this market. Spot prices are: Maryland standard 2s, 82½@87½c; Maryland standard 3s, 95c; Maryland standard gallons, $4.00; New Jersey 3s, $1.10@1.15; New Jersey gallons, $3.75.

A strong undertone is noted in the corn market, but buying, at the moment, is on a moderate scale. For Southern stock demand has increased slightly of late and business has been correspondingly better. The fact that production this year promises to be less than the average production and consumption of the past three years is partially responsible for the improved feeling in the market. The reduction of acreage in a considerable proportion of the growing regions, and the backwardness of the season have contributed largely to the present somewhat improved condition. Spot prices are: New York State, 72½@75c; Southern Maine style, 62½@65c; Western, 65@67½c; Maine standard, 85@87½c; Maine fancy, $1.00@1.05.

Peas are firmer on the sifted and fine sifted grades. The supply appears to be below requirements, for the present, at least, though it is impossible to say what the later pack may do for holders, Western packers, it is reported here, are almost certain to make short deliveries and according to the latest reports fom State packers their deliveries will be less than expected. Spot peas are firm and movement is slow owing to the comparative indifference of buyers.

HARLEM.

Howard's System of Capping

Is now used by hundreds of Canners whom you will know, and why not? Our price is so reasonable that every house can afford to buy. ¶Are you having trouble capping cans with 2 7-16 inch openings? Just drop us a line, and we will show you how easy it is to cap large mouth cans. ¶Our booklet will interest the man that thinks, buys, and plans for a canning factory. Write for it. ¶We have repeated orders this season from firms that bought last year.

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WANTED { PICKLES IN BRINE / SAUERKRAUT

¶Either for immediate shipment or future 1907 pack. Let me dispose of your products in this line. Reliable information always furnished. For reference consult Bradstreets, R. G. Dun & Co., and "The Canner."

O. H. PFERSDORF,

21 WABASH AVENUE, CHICAGO **THE PICKLE AND KRAUT BROKER**

TO SAUERKRAUT MAKERS

ORDER NOW BEFORE TOO LATE

Have Succeeded in Getting a Consignment on My Large No. 5

German Cabbage Cutting Machines

Which will arrive in New York **AUGUST FIRST,** consequently all danger of delays for 1907 is past as long as this consignment lasts. Order now so that you will be sure to have the best Machine, which will give you **THE LONG CUT QUALITY.** Every **"GOOD THING"** has its imitators and you know it is costly to experiment. My Machine is no Experiment because the largest Kraut Cutters in the United States use it, and they are placing duplicate orders.

Facts talk--to be shown, write

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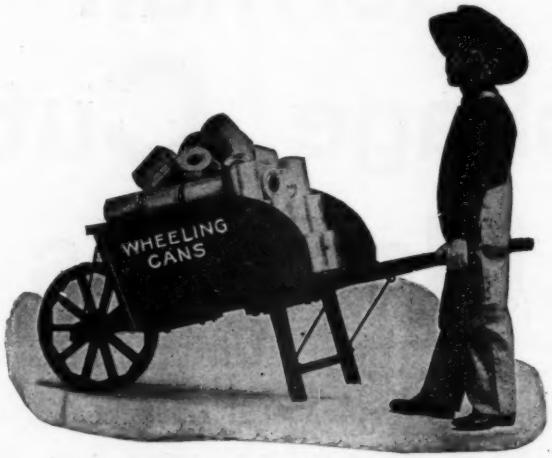
The National Pure Food Law Says:

Tin containers must be outside soldered.

We are prepared to furnish the trade with Cans that are entirely outside soldered.

Cans that have no solder on the inside of seam.



Cans that are made of non-acid flux.

Cans that are clean both inside and outside.

Give us a trial order and we will convince you that **Wheeling Cans** are as near perfect as it is possible to make them.

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Wheeling Can Company,
Oliver J. Johnson, President

National Canners' Laboratory.

By Edward W. Duckwall, M. S., Director.

Prof. Duckwall's reports on work done at the National Canners' Laboratory are published exclusively in THE CANNER. They appear in the first issue in each month and cover topics of general interest to packers of Food Products.

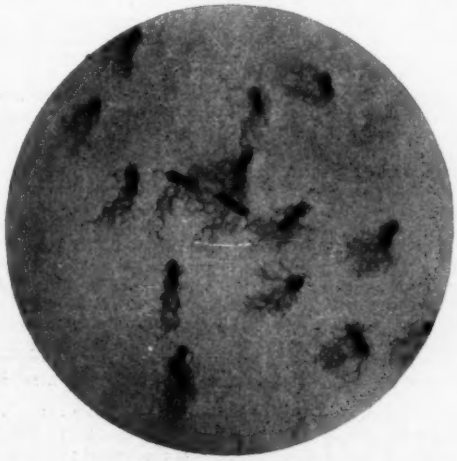
This is the season of the year when the packers of peas are busy taking care of their product as it is delivered. A great many packers are using a process of 20-25 minutes at 240°. We have found upon examination of some of these goods that bacteria often develop in the incubator, and it is only a question of time when spoilage will develop in the wareroom. It is very strange, indeed, why packers should cling to the idea that a process so short is sufficient to keep peas. After all that has been written on this subject and after the numerous reports that have been made of spoilage, it is difficult to understand why the packer should take such chances. One packer in whose goods we discovered bacteria informs us that he has been using a 20 minute process for a number of years without having suffered any loss. Such a report is remarkable, indeed, in the face of every case which we have investigated where a process of even 30 minutes at 240° has been insufficient. Some of the severest losses that we have investigated developed in peas which had been processed for 30 minutes at 240° Fahr. There were two lots of goods canned by that packer, one containing saccharin and the other containing sugar. The goods containing saccharin did not spoil, while the peas which contained sugar soured and swelled within six weeks after packing. This spoilage occurred, however, on the floors above the basement. Down in the basement, where a part of the stock was kept, no sours or swells had developed up to that time, but a thorough incubation of the goods showed that the bacteria had not been destroyed, and their failure to develop was due to the cool temperature of the basement.

Spoilage of peas or any other canned goods may be exceedingly slow. The process may be very close to the danger line and the spores of bacteria may have been destroyed in full 90 per cent of the cans, while the remaining 10 per cent may have living spores in the cans, and those spores may be so injured by the heating to which they have been subjected that they will not develop readily for some little time after the pack, particularly if the temperature is not most favorable for their multiplication. As we have explained in previous reports, these bacteria multiply most rapidly at or near blood temperature, that is, about 98° Fahr. They multiply very slowly as the temperature falls to 60°, and we do not believe there will be any development below that point. A man may process peas 20-25 minutes and then store them in a cool place, and they may keep for several months without showing any signs of spoilage. In fact, we have known cases where canned goods were insufficiently processed and they were shipped and consumed before spoilage developed. We have known some cases where peas processed a shorter time than required did not either sour or swell, but did develop a bitter flavor, due entirely to bacteria. We have had several cases of this kind. One investigation we made brought out the fact that this bitter flavor was developing gradually in the cans after incubation; the juice was clear, almost sparkling, and the peas were whole and firm, and yet when this juice was examined under the microscope it contained a great many bacteria,—rod forms linked together to form chains or threads,—some of them were composed of twenty-five or thirty rods linked together. In some cans where the bitterness had developed more than others of course the juice was not so clear and the bacteria were more numerous. A test was made in the laboratory. Several persons were called in to taste these peas and nearly every one thought that they were all right, could not detect any defect in the flavor. It was hardly noticeable in some cases and yet the microscope revealed the presence of bacteria. There is no question but that this spoilage would be very slow before the trouble became sufficiently pronounced to cause rejection of the goods.

There is no question but that a great many peas are underprocessed, sold out on a quick market and consumed before spoilage takes place, but a packer cannot afford to take chances of this kind. He never knows when he will have to carry his goods over for several months. He never knows but that some jobber will pile his goods away in the corner of the wareroom where they will remain for perhaps a year before they are sold out and consumed. One of the severest losses experienced by a New York packer did not come on him until the year following the pack. There is no reason why a canner should take chances on a matter of this kind. The risk is entirely too great and there is no necessity for underprocessing. We know about where the danger line is, and we know that if peas are properly handled during the process of canning that they may be sufficiently sterilized without injuring the flavor to any appreciable extent and without having cloudy liquor. We are informed by letter that there are a great many packers who are using a process of 25 minutes and even less on their peas this year, and we trust that this warning will get out in time to prevent any serious losses, and the packers who have been using such a process should have their peas examined before it is too late. They can be saved now, but should they sour or become bitter we do not know of any way in which serious losses can be averted.

Spoilage is more liable to develop in the sweet, wrinkled variety of peas than in the other varieties. It is also more liable to develop where sugar is added. Sugar, whether present naturally or added, seems to furnish an element favorable to the multiplication of bacteria. Saccharin, as it was used in years gone by, acted as a preservative. The same process which was given peas containing saccharin could not be used with safety on the sweet, wrinkled varieties, or on peas to which sugar had been added.

CUT 136.



Bacillus of Sour Peas.

CUT 139.

Bacillus of Swelled Peas.

There was a time when we had the idea that the larger, older peas required more processing than the young, smaller or tender varieties. The results of our investigations in the last two or three years have shown this idea to be erroneous. Spoilage is more liable to develop in the young, tender va-

rieties than in the older, and we attribute this to the excess of sugar in the young varieties. The subscribers to the Laboratory have been sending in quite a number of peas for incubation and bacteriological tests during the month of July, and we have noticed that quite a number of these samples had cloudy liquor. While in most cases the peas appeared to be good enough yet the cloudy liquor injured the general appearance very much, and we have thought it advisable to dwell somewhat upon the cause of cloudy liquor so that those who have not yet finished their pack can take advantage of this information and endeavor to correct the trouble.

Cloudy liquor may not be due to any one cause. The packer will have to use his judgment as to just what the cause is. In many cases we can offer an opinion from examining the goods here at the Laboratory. In other cases we cannot. Cloudy liquor is usually noticeable several days after packing. Sometimes the cans may be cut open right after the process and the liquor appear to be perfectly clear, and yet in a few days it will cloud up. Peas where they are freshly hulled from the pod are not sticky or mucinous, but if the machines crush the smaller peas or the vines so that the juice of these is allowed to get on the freshly hulled peas, they will be sticky. This may all be removed in the blanching, particularly if the peas are quite fresh. If, on the other hand, the peas have been allowed to stand for some time after they are hulled, they will be sticky or mucinous, and this is due entirely to the action of bacteria. It is a product which is formed by the growth and multiplication of bacteria on the sugar, starch and proteids. When working on peas we have isolated several varieties of bacteria which will cause this condition. One of the most common germs is the lactic acid bacillus, the very organism which causes the souring of milk. It is present in the air in great numbers, and it starts to grow wherever the juice of vegetable matter is exposed to its action. Another germ which is present on the pea itself in the spore form is Bacillus Mesentericus vulgatus. This organism when grown on pea juice will change it into a viscid mass which may be lifted in long threads. Some of the anaerobic bacteria may also start to develop in peas and the fiber and cellulose may become softened or porous, so that the juice of the peas is exposed to the action of the lactic acid germs. When this takes place it is difficult to remove all the mucinous matter in the peas by a simple blanching. If peas are allowed to stand too long after being hulled these bacteria multiply enormously and lactic acid is formed in appreciable amount. We have known cases where peas have become positively sour before they were canned. The danger here is not so great as a little later on, if the peas are allowed to stand after blanching.

One of the best methods of preventing cloudy liquor is the complete blanching of the peas. This should be carried on for anywhere from 6 to 10 minutes, according to the peas and their condition. It was customary at one time to use alum as an astringent for closing the pores in the skins and for toughening the skins so that the starchy matter would not escape into the liquor, during the process. The same result may now be achieved by giving the peas a bath for 10-15 minutes in cold running water. Peas which have been allowed to stand too long either before blanching or afterward are liable to give the packer a great deal of trouble with cloudy liquor after they are processed.

There is an anaerobic organism which was discovered by Prazmowsky called Bacillus Butyricus amylobacter. It acts upon the cellulose and softens the fiber. There is another bacillus, also an anaerobe, which very closely resembles this organism except in spore formation. The first variety forms spores in the center of the rod and the latter forms spores almost at the end. The spores of this latter variety are quite resistant to high temperatures, and we have frequently found it to be the cause of swells in the finished product. Where this organism is allowed to grow on the raw peas or on the peas after they are blanched there is no way to prevent cloudy liquor. We made a number of experiments one time with this organism, purposely inoculating peas with a pure culture, and after they had stood for some time we endeavored by careful blanching and care in filling and brining to prevent the clouding of the liquor, but were not successful.

In our examination of the raw peas we have found many varieties of bacteria similar to these kinds described. They form volatile and fatty acids and impart unpleasant flavors to peas which are allowed to stand exposed. The packer who would avoid cloudy liquor should not allow either the raw peas or the blanched peas to stand for any considerable length of time. We see where one Wisconsin packer uses on his labels the words: "From the field to the can in the quickest possible time." This should be used as a motto by every canner and faithfully observed.

Another cause of cloudy liquor in peas is filling the cans too full. The peas swell some during the sterilization, and if they are packed in the cans too closely there will not be room enough for expansion. This cause the skins to burst and permits the starch to escape and the liquor becomes cloudy with particles of starchy matter from the peas themselves. We frequently get samples here in the Laboratory showing that the cans have been filled too full. Many packers do not seem to realize that this is the cause of their cloudy liquor. Unevenness in filling is more frequently the result of hand work, where the matter is left to the judgment of employees. If a good filling machine is used and set properly the operator can control the filling with precision. The cans should be not fuller than three-fourths of an inch from the top.

Cloudy liquor may also result from over-processing. As a rule canners do not over-process their goods, but there is danger of this where a packer has suffered loss from spoilage in the previous season. It is surprising how much processing a pea will stand without cooking to pieces, but of course if the heating is pushed too far, the skins will burst and the contents of the pea will escape into the liquor. There is more danger in over-processing the larger peas than the smaller varieties. The larger peas seem to be more starchy. They require less processing than the smaller varieties. They contain less sugar and if they are not artificially sweetened may be processed for considerably less time than the younger varieties.

Imperfect sterilization is more often the cause of cloudy liquor than over-processing. If the bacteria are not destroyed they will multiply in the juice and cause it to take on a cloudy appearance. Bacteria will not multiply in cans which are processed sufficiently. The spores are killed by the heat and there is no development. A great many canners keep a close lookout for swells during the canning season but do not take proper note of peas souring where no swells are developed. The swells are produced by anaerobic varieties of bacteria which are much more easily destroyed than the bacteria which cause flat sours. In flat sours the liquor is always cloudy, the cloudiness increasing as the bacteria multiply. I remember well a good demonstration of this while investigating a very serious case of spoilage about two years ago. We could always tell the sour cans as soon as they were cut. The liquor always had a cloudy appearance, while the sweet cans, those which were free from bacteria, had bright, sparkling liquor.

In conclusion we make the following suggestions:

Cut the vines and thresh out the peas when they are just right for canning.

Take care of the freshly hulled peas as quickly as possible.

Blanch them thoroughly from 6-10 minutes.

Chill in cold running water.

Fill the cans about three-quarters of an inch from the top.

Cover with a good, clear brine heated to about 190° Fahr.

Process the smaller sizes for at least 35 minutes at 240°.

The larger sizes may be processed a little less. They ought to keep well with a 30 minute process at 240°.

Samples of peas from each retort should be put into a warm room, where the temperature can be maintained at 98° Fahr. The peas should be thoroughly chilled. The cans should be absolutely cold before they are stored in the wareroom. They should be stored so that there will be air spaces between the piles.

Samples should be examined under the microscope after they have been in the warm room for four or five days. In this way any imperfectly sterilized goods may be checked up before they go wrong in the wareroom. They may be recooked according to special directions.

When samples are sent to the Laboratory always send at least a case so that a thorough examination can be made.

The Preservative Question.

Mr. Chas. F. Loudon of Terre Haute, Ind., read a paper at the seventh annual convention of the Association of State and National Food Department held at Jamestown last week. The subject was the preparation of tomato catsup with and without preservatives. Mr. Loudon takes the view that while it is possible to pack tomato catsup without the use of preservatives it is dangerous to send it out to the consuming public for fear that it will undergo decomposition after the seal is broken and that the products of this decomposition would probably do a great deal more harm to the persons eating the catsup than would the small amount of preservative necessary to retard the bacteria, yeasts and molds. He criticises the experiments made by Dr. Wiley in making a test of preservatives by increasing the amount until the limit of toleration was reached. Mr. Loudon's conclusions are that every respectable packer will be glad to put up goods without

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a preservative and that they are now experimenting in the hope of producing catsup without a preservative that will keep a sufficient length of time after opening to be satisfactory to consumers and safe for their use.

The majority of manufacturers take the same view as Mr. Loudon, and they are correct from their point of view. They have every reason to believe that benzoate of soda is not a harmful substance, and we believe that they are right. A man has a right to read a paper and give his views of what he thinks is right and wrong in matters of this kind, but in the face of such opposition as is being put up against preservatives it would be more diplomatic on the part of the manufacturer to take the stand that he would do everything in his power to comply with the law and stand ready and willing to put out his goods without a preservative. It is not surprising that manufacturers who have discontinued the use of preservatives are now making such a bold declaration against them. I quote a paragraph from the paper submitted by Mr. Sebastian Mueller of the H. J. Heinz Co.: "A few years ago at the National Pure Food Congress in St. Louis I said to you that artificial preservatives should be restricted. I say to you today that they should be entirely eliminated from any and all foods. They are not necessary. Sour and sweet pickles can be put up and kept without alum or preservatives. Tomato products, mince meat, fruit preserves, fruit butters, fruit jellies, sauces, relishes, and all other products of fruit or vegetable origin, can be kept without preservatives. It is true that in some few cases the manufacturer may have to deviate from his present way of manufacturing and packing, and when he has done so he will find that he can carry on his business better and with less loss than heretofore."

Here is a man who a few years ago was a strong advocate of preservatives, but he saw plainly that the authorities were going to rule them out of food products and he made experiments and certain changes in formulas to put up these different kinds of food products without the use of a preservative. This was diplomatic. Here was an opportunity to take advantage of a situation and gain prestige by offering to the public goods which were free from any substances declared by the Chief Chemist of the United States to be harmful. Good business judgment was displayed here rather than any conscientious scruples in the matter. It is vastly more expensive to manufacture goods without preservatives than it is with their use. The raw material has to be taken care of and either worked up into the finished product, or it must be put up in cold storage or sterilized in tin cans. Changes in spicing, sugar, salt and other ingredients in the finished article will assure its keeping for quite a considerable length of time after the seal is broken. There is no question but that catsup can be manufactured so that it will keep fully a month after the seal is broken and there need be no preservative present. We would advise all manufacturers of tomato catsup and other food products in which a preservative has heretofore been used to get into line at once and carry on their experiments this year, and get ready to meet the issue, because preservatives will surely be ruled out of food products, and the sooner the manufacturer gets into line the more confidence it will inspire and the larger will be his trade. It is no longer a question of whether preservatives are harmful or not. The grocers have come to regard these substances as harmful and they have been put to endless inconvenience in many States, so that they are willing to give their trade to the firms who offer goods without preservatives.

We repeat that it is possible and practical to put up all these substances without a preservative. There is no secret connected with such processes. It all depends upon special care of raw material and certain changes in ingredients. Every manufacturer who has up to this time changed his plans and his formulas is now opposed to the use of preservatives, and with good reason. He has paid for his experiments. He has accomplished the result and he wants to stand on it. Why shouldn't he be in favor of a law prohibiting the use of preservatives?

Benzoate of Soda in Catsup.

Manufacturers of tomato catsup have been under the impression that at least half of the benzoate of soda added to the pulp and catsup is boiled out or volatilized during the cooking. THIS IS A MISTAKE. Only a very small part is lost in this manner. Every catsup maker who is depending on benzoate of soda as a preservative, must use at least 1/5 of 1% in order to prevent fermentation, and a quantitative analysis will show approximately this amount, therefore if by law only 1/10 of 1% is to be allowed in catsup (during 1907), the manufacturer is just as much handicapped as if the substance were entirely prohibited. Up to this time accurate methods have not been framed for making quantitative determination of benzoate of soda in food products but there is a fairly accurate method known by some chemists and improvements will be made so that the authorities will be in position to prosecute any who use the preservative in excess of 1/10 of 1%.

Three Months of Denatured Alcohol.

This is the title of an article recently appearing in the Scientific American which gives a view of the present status of the alcohol industry under the denatured alcohol law. It was hoped by some representatives of the food industries that denatured alcohol would open the way for utilization of some of the by products, and this article is of interest in showing conditions existing as a result of the enactment of the law. So far no material change has been made in the industrial conditions, as some had predicted. However, ethyl alcohol industries have been stimulated to some extent without any material affect being felt by the methyl alcohol producers. It was originally predicted that a price of 20c per gallon would be realized for denatured alcohol. So far denatured alcohol has been obtainable at 35-40c per gallon, which of course prohibits active competition with gasoline or kerosene for either illuminating or power purposes. The price realized for denatured alcohol, however, will probably decrease as its use in the arts becomes more widespread, and uses are found for by-products of its manufacture, or cheaper sources of supply for raw materials are obtained.

The article also calls attention to the recent amendment to the law in connection with the manufacture of alcohol on a small scale. In accordance with this amendment denaturing warehouses are not required when the capacity of the still is less than 100 proof gallons per day. In such cases the alcohol may be conveyed to warehouses after denaturing by pipes or cars. As previously suggested, it is probable that plants serving a number of patrons would be more satisfactory than small individual distilleries.

Perry Vinegar from Kieffer Pears.

Perry vinegar is less known in this country than in England or on the Continent. Aside from certain limitations, however, pears form a desirable raw product for the manufacture of vinegar. Experiments along this line have recently been conducted by the Bureau of Chemistry of the United States Department of Agriculture. In this series of experiments the Kieffer pear was employed, this pear being selected on account of the fact that it is extensively grown in various parts of the United States, is very productive and resistant to blight. It is, however, a large, coarse variety, and when there is a sufficient supply to choicer varieties of pears obtainable, Kieffer pears are often too low in price to pay for marketing. It was in view of this fact that the Bureau of Chemistry undertook the experiments in regard to the manufacture of vinegar from the juice of Kieffer pears. In the preparation of the juice it was found that a high yield was readily obtained, 4½ gal. of juice per bushel being obtained by means of a large hand-power press. In the experimental work fermentation was carried on both by wild yeasts and by dominant fermentation with pure cultures. Good results were secured by both methods, though a considerably higher yield of alcohol was produced by dominant fermentation with a pure culture, approximately one-third more alcohol being secured by this means. The unfermentable solids present in the pear juice were found to be very high in both cases, though somewhat higher where dominant fermentation was employed than in the uncontrolled, this probably being due to the fact that rapid multiplication of the yeast held in check organisms which attack the solids.

Vinegar was prepared from the Perry obtained by dominant fermentation by acetification in a small, rapid-process vinegar generator, eleven days being required for the maximum of acid to be obtained. The vinegar thus secured was high in acetic acid and of a pleasant odor and taste, in many ways comparing closely with cider vinegar, though having a high content of solids and a considerable quantity of pentosans. From a study of the solids it was found that they consist mainly of carbohydrates of unknown composition, which were found to be of low rotatory and reducing power, being in this respect similar to the "amylans" of barley and malt. The following analysis of the Kieffer pear vinegar together with that of a normal cider vinegar will readily illustrate the character:

KIEFFER PEAR VINEGAR.

	Pct.
Total acid as acetic	5.16
Total solids	5.90
Ash	.22
Alkalinity of ash as K_2CO_3	.18
Reducing substances as invert sugar	.4

Polarization in 200 mm. tube	1.6
Pentosans	.26

CIDER VINEGAR.

	Pct.
Total acid as acetic	4.94
Solids	2.49
Ash	.34
Alkalinity of ash as K_2CO_3	.20
Reducing substances as invert sugar	.25
Polarization	1.3
Pentosans	..

In addition to the above study of vinegar from Kieffer pears, study was made of the composition of Kieffer pear juice to determine its usually sugar content and the content of undetermined solids. Analyses were made of the juice from samples of Kieffer pears obtained from several localities where extensively grown, the analyses showing a content of undetermined solids varying from 3.93% to 6.7% and a total sugar content as invert sugar varying from 4.49% to 7.53%. The above determinations were made upon the juice of market ripe Kieffer pears and would show a sugar content too low to produce a vinegar containing 4% of acetic acid. Experiments carried on as to increase of sugar in further ripening showed a gain of over 2% in one sample which was rather green. Other samples somewhat riper showed a similar gain, though in less amount. The pears were found to contain very little or no starch, so that the increase in sugar content would need to be accounted for by the undetermined solids being in part changed to reducing sugars during the ripening. The experiments, however, indicated the maximum sugar content for Kieffer pears to be attained when very ripe, so that they should be taken at this time for vinegar making.

The general conclusions from the work are that Kieffer pears at market ripeness are so low in sugar as to make it difficult to produce a vinegar of standard strength. The juice of very ripe pears, however, would probably contain sufficient sugar to produce a vinegar of standard strength, if proper methods of fermentation were employed, which would give the maximum yield of acetic acid from the sugar present, dominant fermentation with selected yeasts followed by conversion of the alcoholic liquor by acetification with rapid generator process being recommended. The vinegar obtained was pronounced to be of excellent quality, differing in composition from cider vinegar in its high content of solids and pentosans.

Studies on Apple Juice.

The Bureau of Chemistry has for several years been carrying on experimental work with apple juice, part of the work being in collaboration with the Virginia Experiment Station. Some of the more recent work, however, has been conducted by the Bureau of Chemistry in the middle west. Some of the questions recently investigated in this work were for the purpose of throwing light on the following questions:

The Value of Juice from Cull Apples for Cider Making.—The culls consisted of apples rejected for market purposes, either because overripe for packing, because under-sized, wormy or otherwise injured. The juice from culls was found, generally speaking, to become richer in sugar and acid as the season progressed. The undetermined solids, however, remained practically constant, during the season. The total solids for the juice from cull apples varied from a minimum of 9.52 to a maximum of 16.97%, with an average of 13.07%, while the total sugar as invert varied from a minimum of 6.94 to a maximum of 13.72%, with an average of 10.13%, and the acid varied from a minimum of .04 to 1.32%, with an average of .50%, these figures showing the juice from the culls to compare very favorably with the average apple juice or cider.

Comparison of Juice from the Cider Mill at Various Times During the Season.—This did not permit of a comparison between the composition of the mill juice and juice from cull apples on account of the fact that the mill ran irregularly and that windfalls and custom apples were being constantly mixed in the pans with culls from the packing house. The analyses made showed a variation from 11.14 to 13.40%, with an average of 12.38%, for total solids. The total sugar as invert varied from 8.36 to a maximum of 10.74%, with an average of 9.72%, while the acid varied from a minimum of .24 to a maximum of .57%, with an average of .40%. The summer and early fall apples showed a much lower percentage of total solids and likewise of total sugars than the later varieties.

Analyses of Juice from Standard Varieties of Apples Grown in Nebraska.—These showed an average of 13.24% of total solids, 11.4% of total sugar as invert, .42% of acid as malic, and 1.48% of undetermined solids. These analyses in comparison with analyses of apple juice from different portions of the United States show the Nebraska apples to contain an amount of total solids and sugars equal to those of apples grown in eastern States, though somewhat below the figures shown by Van Slyke for New York apples.

A Study of the Juice of Summer Apples in Regard to Their Value for Vinegar Stock.—Apple juice of this character is usually considered by growers to be of little value for vinegar stock on account of the difficulty of preparing vinegar of standard strength, the juice being low in sugar and in many cases acetic fermentation having developed to a greater or less extent. It is pointed out that acetic fermentation with development of acetic acid retards or even stops alcoholic fermentation. Consequently it is difficult to secure the maximum alcoholic fermentation, unfermented sugar being left in the juice, and as the juice already contains only barely sufficient sugar for producing a standard vinegar the vinegar obtained would be low in acetic acid. The experiments were carried out in regard to two lots of juice obtained from Early Harvest and Duchess apples, results showing that nearly the theoretical yield of alcohol could be obtained from these juices by fermentation, and if the cider obtained had been successfully handled in a quick process generator should have produced a vinegar of about 4% strength. The vinegar, however, would have been quite low in solids.

A Study of the Juice of Decaying Apples.—At times in running a cider mill decayed apples are encountered, and the work had its practical significance in the question of the value of such apples as vinegar stock and as to the influence of decayed apple juice on the juice of sound apples as regards proper fermentation. The question of wholesomeness of vinegar made from such stock was not considered. The juice employed was that of thoroughly decayed summer apples which were taken from bins at a cider mill. The juice had the odor of acetic acid but possessed no disagreeable or musty odor or taste. The analysis of the juice showed the sugar or cane sugar originally present to have been practically all inverted. The total sugar had been materially lessened in amount with the production of about .75% of alcohol and .67% of acetic acid, showing the changes which had taken place to compare with those which take place in any juice when fermented for vinegar, except that the processes here had gone on more or less simultaneously. The chief item of interest in this connection would be the production of acetic acid which would affect unfavorably the value of the

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juice for vinegar stock by inhibiting the alcoholic fermentation through the presence of the acetic acid.

The Chemistry of Vinegar Manufacture.

In connection with the above reviews of work carried on in connection with vinegar manufacture it may be of interest to consider some of the principles underlying vinegar manufacture. Vinegar being the product formed by the acetic fermentation of an alcoholic liquid by the organism Mycodermi aceti, it will vary according to the source of the alcoholic liquid. While vinegar may be produced from acetification of a dilute solution of pure alcohol it is usually produced from fruit juices or other saccharine liquid which has undergone alcoholic fermentation on account of the flavors imparted by the products fermented for acetification. Thus we have apple cider vinegar, wine vinegar, perry or other fruit vinegars, malt vinegar, spirit or grain vinegar, glucose vinegar, molasses vinegar and wood vinegar. The U. S. Standards as compiled under the direction of the Secretary of Agriculture recognizing cider, wine, malt, sugar, glucose, and spirit vinegars. All of these vinegars except the spirit or distilled vinegar are produced from saccharine liquids or juices which have first undergone alcoholic fermentation and then acetification. In the case of the spirit or distilled vinegar, distillation is employed after alcoholic fermentation of saccharine products, so that the resulting vinegar contains no characteristic solids, its flavor being due to acetic acid and to certain compound ethers, chiefly acetic ether, resulting from the action of acetic acid upon small amounts of alcohol which do not undergo acetification. All the other vinegars, in addition to the flavors due to the same products as in the distilled vinegar, owe their flavor in part to the products from which they are obtained, and which being present in the vinegar give it character. Cider vinegar contains a certain amount of solids due to the presence of unfermentable substances in the apple juice and the unfermented sugars as well as to the mineral ingredients of the apple juice. These ingredients are fairly constant for a cider vinegar and give character to it. Thus, the U. S. Standards require that a cider vinegar contain not less than 1.6% of apple solids, of which not more than 50% shall be reducing sugars, and in consequence of the reducing sugars it should be laevo-rotatory. There should be not less than .25 grams of apple ash, the water-soluble ash from 100 cc of vinegar being required to contain not less than 10 mg. of phosphoric acid and to require not less than 30 cc of N/10 acid to neutralize its alkalinity. Wine or grape vinegar of course would be characterized by different solids than cider vinegar, the United States requirements being not less than 1% of grape solids and not less than .13% of grape ash. Malt vinegar being the product of the alcoholic and subsequent acetous fermentation without distillation of an infusion of barley malt or other cereals, is characterized by the solids taken up from the grains from which it is prepared. The U. S. Standards require that it be dextro-rotatory, contain not less than 2% of solids or .2% ash and that the water-soluble ash from 100 cc. of the vinegar contain no less than 9 mg. of phosphoric acid nor require less than 4 cc. of N/10 acid to neutralize the alkalinity. Sugar vinegar is the product made by alcoholic and subsequent acetous fermentation of solutions of sugar syrup, no standards being prescribed as regards solids or ash. Glucose vinegar is simply prepared from starch sugar or glucose, and would be dextro-rotatory owing to the presence of small amounts of unconverted glucose. The U. S. Standards require that all the above vinegars should contain not less than 4% of acetic acid.

In the case of all the vinegars mentioned except malt the manufacture starts with a saccharine solution. In the case of malt vinegar, cereals are the starting point, the starch of which is converted by malt into starch sugar, which can then be subjected to alcoholic fermentation. The sugar present in fruit juices is largely invert sugar, but in some cases to a greater or less extent is cane sugar or sucrose. In the case of malt or glucose products the fermentable sugars would be present principally as dextrose or maltose, while in sugar house residues both cane and invert sugar would be present. The dextrose, maltose and invert sugar are all directly fermentable by yeasts. Cane sugar, however, has to undergo hydrolysis before fermentation. Hydrolysis, however, is brought about by yeasts, so that alcoholic fermentation proceeds very readily in the dilute saccharine solution. Frequently fermentation is allowed to take place by means of organisms which are everywhere present in the air. However, dominant fermentation by pure cultures of yeast, such as has long been practiced in the case of the manufacture of beer, is coming more into use. It is not necessary to completely sterilize the liquid to be fermented. If plentifully sown with a pure culture this organism will greatly exceed any others in growth, dominating the fermentation, thus giving character to the resulting alcoholic liquid.

As already stated in this report, the dominant fermentation by pure cultures often greatly increases the yield of alcohol. Also by care in the choice of organisms used great improvement in flavor can often be secured. This is especially desirable in the case of fermentation of fruit juices for production of ciders. In the alcoholic fermentation two products result from the breaking up of the sugar, carbon dioxid and alcohol. Approximately equal amounts are formed, though slightly more alcohol than carbon dioxid results, the theoretical yield of alcohol being slightly over 51% by weight for invert sugar. The next step is the acetification of the alcoholic liquid. This has to proceed in two steps,—first, the formation of acetic aldyhyde, and the oxidation of the aldyhyde, with formation of acetic acid. In this process a molecule of alcohol loses two atoms of hydrogen, taking up one atom of oxygen. However, there is a distinct gain in weight, as the oxygen is much heavier than the hydrogen. Thus, 46 parts of alcohol yield 60 parts by weight of acetic acid, or 180 parts by weight of invert sugar on acetification of the alcohol produced will give 120 parts by weight of acetic acid. This is, however, the theoretical yield,—in practice from 10-15% of alcohol is lost before acetification, so that the recovery of 55% of the sugar originally present as acetic acid is better than is usually done in practice.

There are two processes in general which are employed for the acetification of fruit juices or other alcoholic liquids for the production of vinegar. One is a slow process whereby fermentation goes on through the activity of organisms which come from the air or are introduced through added vinegar, and the other is the quick or generator process. The latter process relies for its efficiency upon a plentiful supply of oxygen to the acetic acid organism, which is secured by passing the vinegar through beechwood shavings and twigs which have been impregnated with Mycodermi aceti. Whenever there is an insufficient supply of oxygen acetic fermentation is liable to stop with the production of aldehyde, which being a very volatile product, results in considerable loss, so that regulation of the generator for a liberal supply of air is desirable.

From the foregoing statements it can be seen that for securing the proper degree of acidity in the vinegar it would be necessary to start with the correct amount of sugar in the solution to be fermented, when if fermented with proper care and acetified without unnecessary loss, no trouble would result in regard to low strength vinegars being obtained. Thus, when these operations are carried on without unnecessary loss any fruit juice or saccharine liquid containing 8% of reducing sugars or equivalent in cane sugar, should yield a vinegar of legal strength, containing 4% of acetic acid. Where a strength of 4½% is required a sugar content of approximately 9% would be required. For the best results, the fruit juices or wash used for fermentation should be free from acid resulting from acetic fermentation, and should be fermented, preferably by dominant fermentation with yeast to secure the maximum yield of alcohol. With glucose and sugar house products the sugar in the wash for fermentation of course could be regulated according to the strength of vinegar desired. In the case of fruit juices which are to be fermented for vinegar, however, other considerations, such as solids and ash, must be taken into account. With the exception of the summer varieties, most apple juice contains ample sugar and solids for producing a legal vinegar. In fact, with most juices the sugar content materially exceeds the amount necessary. Thus, the average apple cider should contain approximately 13% of total solids with a sugar content slightly exceeding 10%, and should with due care give no difficulty in producing a vinegar exceeding 5% in strength and with a solid content materially above 2%.

In the manufacture of vinegar it is the custom to employ second pressings, so that vinegar stock as a rule would probably not compare with fresh apple juice or cider. The amount of sugar unrecovered in the apple pomace after one pressing is always considerable. Calculations made on pomace by the Bureau of Chemistry in regard to sugar recovered in the juice in experiments carried on at the Virginia Station, show approximately 60% of the total sugar of the apple recovered in the apple juice. By proper treatment and another pressing the pomace will yield a large percent of the remaining sugar, and the second pressings mixed with the first pressings where apples of good quality are used, should give a vinegar stock of ample strength for producing legal vinegar. Of course undue dilution of the second pressings would need to be avoided.

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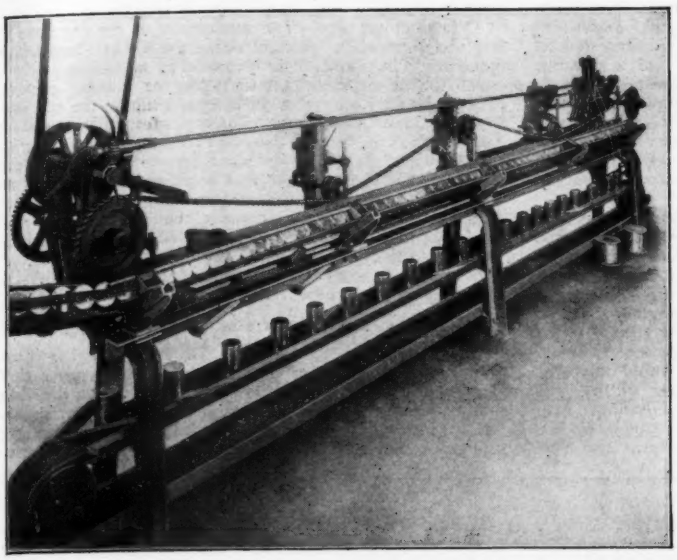

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THE "SUNLIGHT" CANNING PLANT

Written by James J. Mulligan

What more interesting to the progressive packer than a big, brand new canning factory, carrying to realization ideas of practical hygiene and practical economy in operation? Nowadays, when half the public seems directly interested in the pure food question, the sanitary features of a packing plant designed with especial regard for cleanliness at all times are bound to be interesting, while a plant which may be operated more economically than the ordinary cannery, and which can't burn down, ought to be doubly interesting. Such a factory is the J. T. Polk's Canning Co.'s new "Sunlight" canning plant at Greenwood, Ind., which I visited during the height of the pea-canning season.

It is a plant which establishes some precedents in modern cannery building. Before a single contract had been let for work on the "Sunlight" plant, so named on acount of the flood of germ-killing light filling all of its immense rooms, the plans and drawings were submitted to Dr. Wiley, the chief of the Bureau of Chemistry, who approved them in every particular.

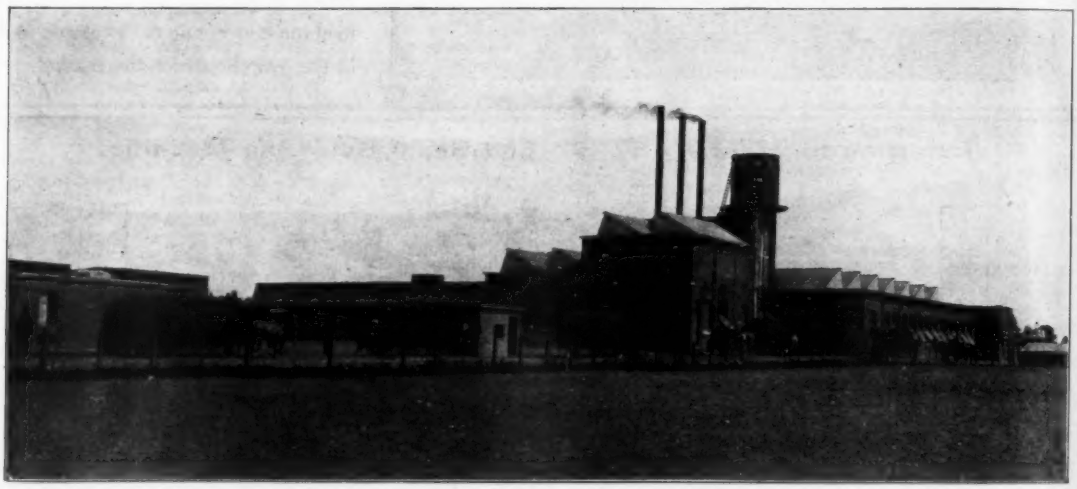
The purpose of the Polks, after the burning of their old factory, was to build such a canning plant as would solve the problem of sanitation, virtually eliminate danger of fire, and reduce operating expenses. Accordingly, Ralph B. Polk, general manager of the J. T. Polk company, accompanied by Mr. O. E. McMeans, of McMeans & Tripp, mechanical and electrical engineers of Indianapolis, to whose ability and understanding of canners' needs the new Polk plant stands as a convincing witness, and Mr. H. H. Larkin, superintendent of the Polk factory, visited a number of the principal food-packing plants of the country, both East and West, in quest of ideas. The Armour plant in Chicago was visited with the idea of seeing what the Government was requiring of the meat packers in the way of sanitary arrangements. Every nook and cranny in the great stock yards slaughtering plants are constantly under the watchful eyes of Uncle Sam's inspectors, and where killing of animals is carried on on such a vast scale "eternal vigilance" is the price of cleanliness; but though entirely different products were to be handled in the new factory that was to be built at Greenwood, it was nevertheless determined that the plant should be absoluely above criticism as regards sanitation. The trio gained some good ideas, and yet the best features to be found in the "Sunlight" canning plant were not suggested by what was seen in other factories, but rather by experience, largely that of Ralph Polk, deep student of packers' problems, man who conceives and, having conceived, carries out. But this is not a eulogy—it is a description of some of the innovations and chief features of a new and unusual canning factory.

"Sunlight" Cannery Rose from Ashes of Old Polk Plant.

It is enough to test the caliber of any set of men to suddenly put up to them the task of replacing, within a very few months, on the site of a plant completely burned, a larger and greater factory. The old Polk plant was burned on the night of December 12, 1906. The suddenness of the fire fiend's visit and the destruction wrought dazed the Polks—but only for a moment. They and their dependable associates were fully equal to the enormous undertaking of making a new and greater cannery spring up on the spot where the old one had stood so many years, and, commencing to plan it before the flames which destroyed the old factory had died down, they started work on the new "Sunlight" canning plant February 12, 1907. On that day the first brick was laid—three months and fifteen days later the wheels were turning in the new factory for trial of the machinery, while in the brief space of seven months from December 12, 1906, when the old factory went up in flames, 3,850,000 cans of peas had been packed, and without the loss of a single dollar's worth, notwithstanding that they came in very rapidly.

Precaution Against Fire—Insurance Economy.

It was natural that the J. T. Polk Canning Company should seek to build a factory practically fireproof throughout. A high rate of insurance had been paid on the old plant, and it burned. The Polks were determined to, if possible, build a new cannery practically immune from fire danger, and one on which the lower insurance rate would represent an important economy, as compared with the rate on the old plant.



General view of the J. T. Polk Canning Company's new plant at Greenwood, Ind. The picture gives an excellent idea of the saw-tooth roof feature commented on in the accompanying article. The north light is seen toward the left over the capping room, and the southern exposure at the right. The ell extending forward at the center is the specialty department.

To show how perfectly they succeeded, I have only to mention that in the new factory there are seventeen separate and distinct departments, any one of which could burn without any of the others being endangered. The fire underwriters, in fact, consider the "Sunlight" plant seventeen different risks, which means a much lower rate of insurance than the average cannery pays.

In order to make it clear why the insurance companies have divided the Polk plant into seventeen separate risks it will be necessary to describe the different buildings and departments. The plant is of brick construction, one story throughout, and is 248 feet long by 96 feet wide for half its length, 112 feet the balance of its length. This main plant is divided into four sections, each division being protected by fire-walls and double fire-doors, making it almost impossible for fire to spread from one department to another. As to the disposition of the several departments, there is an ell 64 by 52 feet on the north side, 32 feet from the west end of the building. This ell is 27 feet high and has a basement. It is built of brick and steel and reinforced concrete, and is absolutely fireproof. In it is located the specialty department, and when carrying non-combustible material in the specialty basement no insurance whatsoever is carried, so infinitesimal is the danger of ignition.

Forty feet from the south side of the main plant is the

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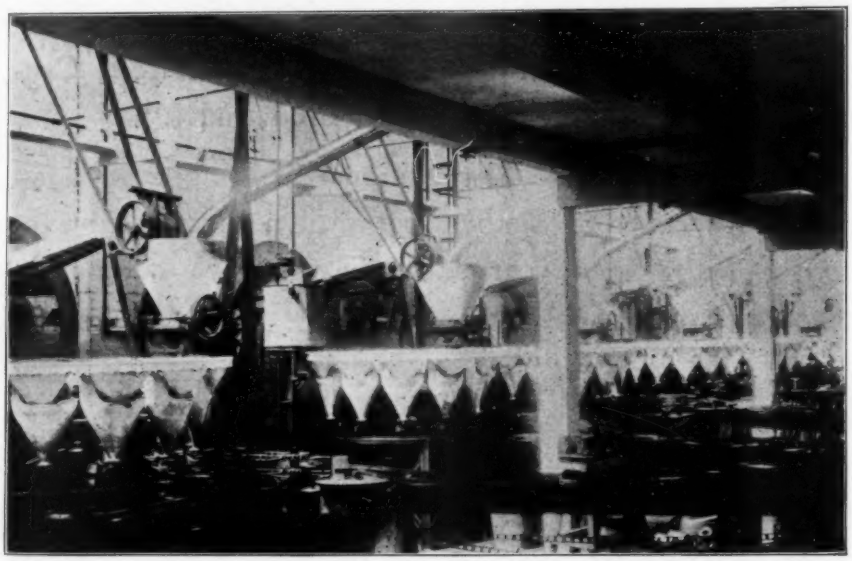
tomato building. This is 64 by 140 feet, built of brick, and is also one story throughout. Forty feet south of the main plant and 40 feet east of the tomato building is the centralized power plant, which is on one of the railroad switches and admirably located for economical steam and power distribution. All power is generated in one plant, steam being carried to all parts of the factory by 500 feet of underground piping. The centralized power plant has effected a material economy in fuel consumption, the reduction being about fifty per cent as compared with the quantity of coal consumed in the old Polk cannery last year.

North of the east end of the main canning plant are located the warehouses, which are separated from the packing departments by 96 feet of open space. These warehouses are one story and basement and built of brick. They are divided into four compartments, or large warerooms, which are entirely shut off from one another by solid brick fire-walls, making it impossible for flames to spread from one compartment to another. There are no windows in these buildings, which are lighted by heavy skylights.

The corn-husking shed is located about 100 feet west of the tomato building. It is frame construction, the dimensions 42 by 144 feet. South of the tomato plant 130 feet is the box storage and nailing department. This building is also of frame construction, 64 by 144 feet, two stories high.

Still farther south, about 200 feet, or somewhat over 600 feet all told from the grading, filling and capping departments in the main plant, are located the two isolated viner buildings. One of these, the east viner house, is 44 by 160 feet, and contains eight viners. The west viner house is located about 125 feet distant from the first and is 40 by 128 feet and holds six viners. From these buildings eight chain and slat conveyors, each 144 feet in length, run out into the factory yard, so that when a rush is on, immense receipts of peas can be quickly handled, the importance of which is instantly recognized, as losses of raw stock are prevented.



View of pea-filling side of the filling room. The illustration shows the flood of purifying sunlight falling directly on the machinery. This is in marked contrast with the darkness in many canneries.

One Filling Room for All Products.

The filling room is one of the unique features of the "Sunlight" canning plant. It is unique in that there is but one filling room for all the products packed, no matter of what kind, and about it are conveniently arranged the other principal canning departments or divisions of the factory. Polk's filling room is bounded on one side by the capping department, into which, of course, all goods must go; on another side by the corn-cutting room, where the corn is cut, washed, silked and resilked before entering the filling room; on another by the pea-grading and blanching room, where the peas are graded both for quality and size before entering the six blanchers, which discharge them through the fire-wall into the cleaning machines directly in front of each of the half dozen fillers. On another side is the specialty room, in which tomato catsup, tomato soup, baked beans and the large line of "Polk's Best" specialty products are made and packed. The tomatoes, after being prepared for the cans, are carried by conveyors from the tomato building into the filling room, where they are filled and run through the exhaust boxes and then into the capping room. The empty cans to be filled are supplied, for all products, from one raised platform in the filling room, an arrangement which effects economy of both time and labor.

The "Sunlight" cannery was built with the idea of having all these operations concentrated in one room, and I am sure it is an idea which will be indorsed by experienced packers, as it unquestionably tends to the securing of a better and more competent grade of help and more efficient supervision of operations in the most important departments in the factory. The better the grade of help the more hygienic will be the surroundings—the more effiicent the supervision, the better the grade of work, and the fewer the shut-downs the greater the speed, all tending to economy of production. Mr. Polk tells me that one of the chief advantages of having a fixed filling room is that the operatives are constantly under the eyes of the superintendent. It is unnecessary to point out that when the eyes of the boss are able to take in at a glance everything going on in what is in reality the center of the most important activities, the workers perform their tasks more briskly, steadily, smoothly, and therefore turn out goods more rapidly and at smaller cost than if the superintendent was off at a distance where he would have to do something more than merely turn his head to sweep with his eyes the entire department.

"Saw-Tooth" Roof Unique in Cannery Construction.

Recognizing that sunlight is one of the best germicides, because it acts constantly, it was decided to adopt, as a means of obtaining for all departments of the new factory the highest degree of sunlight, the "saw-tooth" style of roof, which is unique in canning factory construction.

To give an idea how well the "Sunlight" canning plant is lighted it will only be necessary to mention that there are in its windows 14,000 panes of factory-ribbed glass, letting in a perfect stream of light, brilliant without any discomforting glare, directly on machinery and utensils.

There is high authority for the assertion that sunlight is a wonderful purifying agent. In Sternberg's Bacteriology, page 154, at the conclusion of the discussion of the effect of light on bacteria, we find the following:

"In view of these facts we may conclude, with Duclaux, that sunlight is one of the most potent and one of the cheapest agents for the destruction of pathogenic bacteria, and its use for this purpose is to be remembered in making practical hygienic recommendations."

The roof of each of the buildings is entirely of the heavy "saw-tooth" construction, which provides a solid wall of glass 5 feet high and 16 feet apart for its whole length, while the

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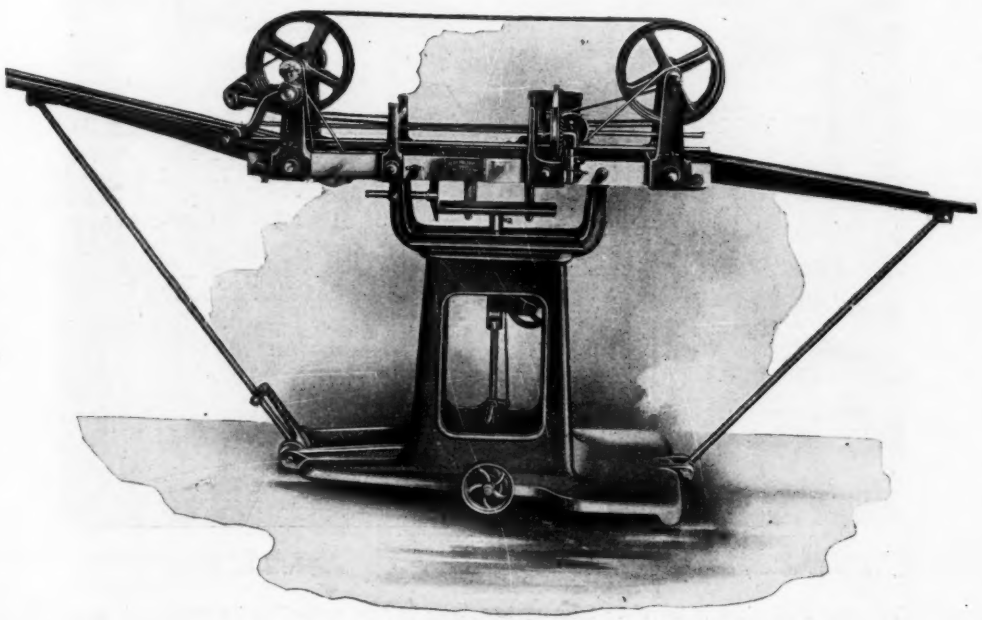

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sides of the buildings are about as liberally provided with windows as possible.

Perfect Ventilation—Polk Plant Cool.

There is another feature of the "saw-tooth" style of roof construction for canneries that scores a strong point in its favor. I refer to the absolutely perfect ventilation it affords. Tests conducted in the Polk plant by Dr. Bitting, the well known expert of the United States Department of Agriculture and professor in Purdue University, demonstrate that the temperature, even in the capping and processing rooms, is actually lower on a hot day than the outside temperature. It averages 4 to 9 degrees lower than the exterior of the building, while most capping rooms are 10 to 12 degrees hotter than outdoors. The new Polk plant is therefore from 15 to 20 degrees cooler than is registered by the thermometer in the capping room of the average canning factory.

A cool capping and processing room is desirable for several reasons. It is beneficial to the help to work in a cool atmosphere, as in the hottest part of the season the workers are not nearly exhausted after a long day of steady application to tiresome tasks. Every packer, even though of brief experience, appreciates the advantages of low temperature in the cannery, for when the hands are not fagged out, as very frequently happens after they have stuck to their work for hours at a stretch in a temperature rapidly enervating, increased efficiency is secured. For instance, the inspection of cans from the cappers is more painstaking and thorough, fewer leaks are passed, and in all respects the general work is performed more cheerfully, energetically and expeditiously —and speed means fewer hands to accomplish a given amount of labor, and that means economy.

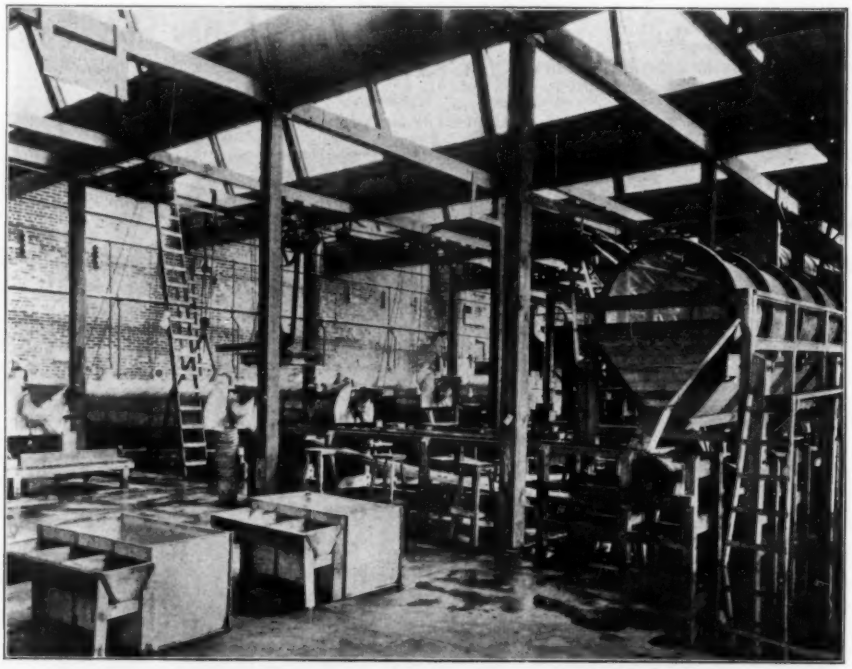
Polk's "Different" Method of Handling Peas.

To use Ralph Polk's own words, the method of handling peas in the "Sunlight" canning plant is "different." First, as to the method of arriving at the right price to pay the grower for his load:

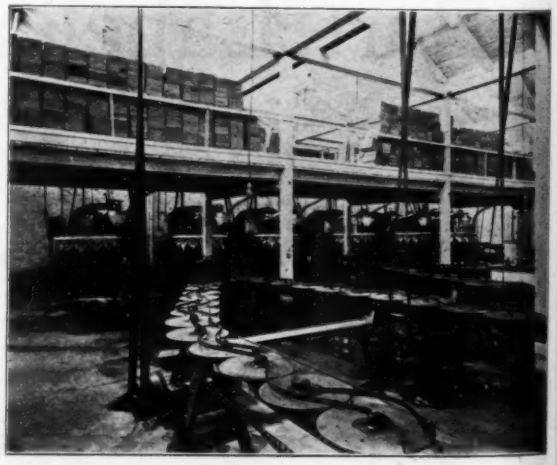
When the peas are received at the factory a price is set for each load by a scientific test which experience has proven to be absolutely accurate. The method in vogue in virtually all other pea canneries is to have an expert "size up," which means "guess" at, the grade of the peas in the load. But in the Polk factory nothing is left to guesswork—instead, a truly sicentific method which insures acurate gauging of the quality of every load that comes in from the fields is employed.

When a wagon load arrives a few pods, usually a fair-sized handful, are selected at random from different parts of the load, then hulled and placed in a glass retainer having a perforated bottom. The retainer is lowered into a small square glass tank containing a quantity of salt water of a certain degree of density. If all the peas come to the top a certain price (40 cents) is paid for the load. In case some of the peas go to the bottom in the water of lesser density, water of another (greater) density is tried. If all the peas come to the top on this water, a lesser price (32 cents) is given the grower. Prices below 32 cents are determined by the amount of peas going to the bottom in the heavy water.

After the price to be paid for the load of peas has been determined and a record made in the book kept for the purpose by "the tester," and a numbered tag put on the wagon, it is driven alongside one of the long conveyors reaching out from the viner house, where the peas are unloaded either on



Pea-grading room, giving an idea of the halation through the factory ribbed glass in the saw-tooth roof. A flood of light streams through, but without the glare made by the sun shining through ordinary window glass.



General view of filling room, showing pea fillers arranged along the wall in the background. The corn and tomato and soup fillers are also in this room, but do not show in the photograph. The filling in one room of all the different lines packed is one of the unique features of Polk's new "Sunlight" canning plant.

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¶ The American people have awakened, and now **recognize** the Sanitary Can as the up-to-date Can for up-to-date packers.

¶ The American people have been watching our "blue streak," and have seen it burn its way from New York to San Francisco.

¶ We have justified our claims for the Sanitary Can, and now have the satisfaction of having it regarded by all, from can maker to consumer, as a necessity in the production of **Better Canned Goods.**

¶ Sanitary Cans and Sanitary Enamel-lined Cans have been **originated, developed** and **perfected** by us. Our many years' experience is worth much to the packer.

¶ We manufacture **only** this type of Can, and devote our entire attention to it. We have no experiments to try out on any one.

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the conveyor or, in case the plant is rushed and cannot handle the load immediately, on the ground, where one handling will put them into the viner.

Danger of Bacterial Infection from Viners Removed.

The viner sheds are 650 feet from the main plant, reducing to a minimum the danger of infection by bacteria from vining processes, as when the vining of the peas is carried on right up against the operating rooms. When viners are situated very close to the grading and picking rooms, there is the maximum danger of bacterial infection, but when the vining houses are far removed danger of contamination of the product by dust and dirt coming from the vines as they are unloaded from the wagons is eliminated. The isolation of the viner houses is an important aid to sanitation.

Pea Weighing "Different" Also.

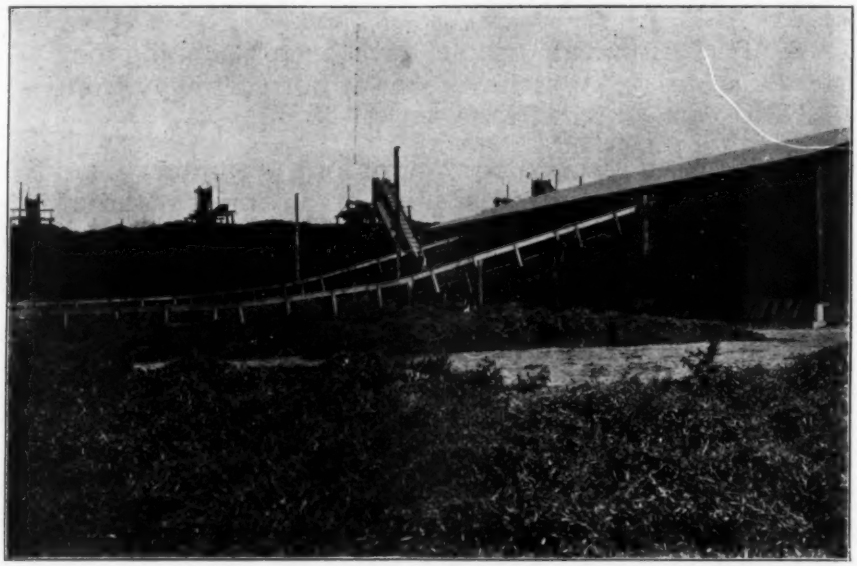
The Polks have a scheme for weighing the hulled peas that is another "different" feature of their method of handling this product. Supplanting the old scales method of weighing the peas brought in by the growers, the Polk people have installed the Climax Automatic Weigher, which is automatically operated by the stream of peas continually flowing into it. As the peas come from the viner they fall on a belt running into the weigher, which automatically weighs and registers the quantity in each farmer's load. There is no chance of a mistake, either as to the weight or the particular load the hulled peas came from. Each viner has its own automatic weigher, every farmer is satisfied, and everything runs on throughout the day as smoothly as clockwork.

But to follow the peas further along in their journey to the can—they drop through the weigher and are conveyed to the cleaning fans. From there they drop into large hoppers mounted on horse trucks, on which they are hauled into the factory 650 feet distant. Arrived at the factory, the door of the hopper is opened, allowing the peas to flow into the "boot" of an elevator, which carries them aloft into the washers in the pea-grading and blanching room of the main plant. The "boot" of this and other cup elevators is made water tight, and a stream of water constantly runs through the "boot," preventing the elevator cups from mashing the peas while picking them up.

Peas Graded by Gravity—the Method of the Future.

When the peas come out of the washers they fall into the machines which automatically grade them by specific gravity into three distinct qualities, and this is still another part of the Polk method of handling peas, making it "different" from other methods. Grading peas by gravity is, I believe, something entirely new. I don't believe it is employed in any other pea-cannery in this country, and it is, in my judgment, the most scientific way that has yet been discovered for separating peas according to qualities. And I go farther: I predict that it is to be the method of the future, as the thorough test given it this season in the immense new Polk cannery at Greenwood, a test conducted by such a natural mechanical genius as Ralph Polk, a man who has originated some of the most useful and valuable canning machinery now in use, a man actually born in the canning business, proves its accuracy and worth beyond a doubt.

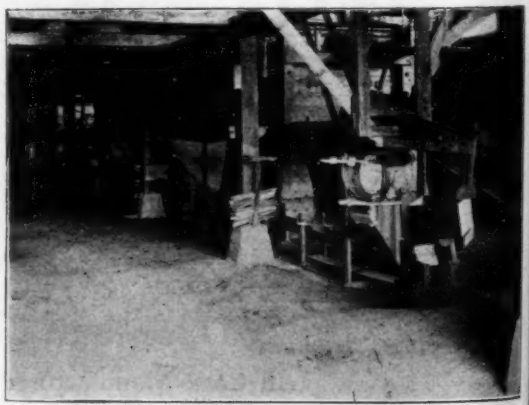
The grading in three distinct qualities is acomplished by running them into a machine containing a large volume of salt water of a certain density. The peas that float are taken out and run through a washer and thence into a large bin. Those that go to the bottom come out and go into another machine of the same kind but containing water of a greater density. The second grade or quality come to the top in this machine, from which they are conveyed through a washing mechanism and into another large bin. The third grade go to the bottom in this machine and, by the same process as I have already described, land in another bin by themselves. The doors of one bin at a time are opened; the peas are elevated to the graders, which then grade them for size. They then drop through the graders onto the picking tables and from there into buckets, where they are stored until run through the blanchers and on through the remainder of the plant.



Peas spread on ground after being unloaded from growers' wagons. View near one of the isolated viner sheds, showing pea vines ready to be placed on conveyors and carried into the viners. This illustration also shows the outside silo and pea ensilage.

Every Foot of Floor Space Covered with Cement.

Where floors, from the nature of the operations and character of products handled, necessarily become wet and more or



Interior of one of the two isolated viner sheds, showing the automatic pea weigher. This device is seen at the right-center of the picture.

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¶Uses REX RUSTLESS PASTE which prevents staining of labels.

¶Our new pasting device can be placed on any Knapp Labeler.

¶With this invention any kind of paste or cement may be used.

¶The Knapp Cap Labeler for labeling the ends of cans is a winner. We make other kinds. Price according to capacity required.

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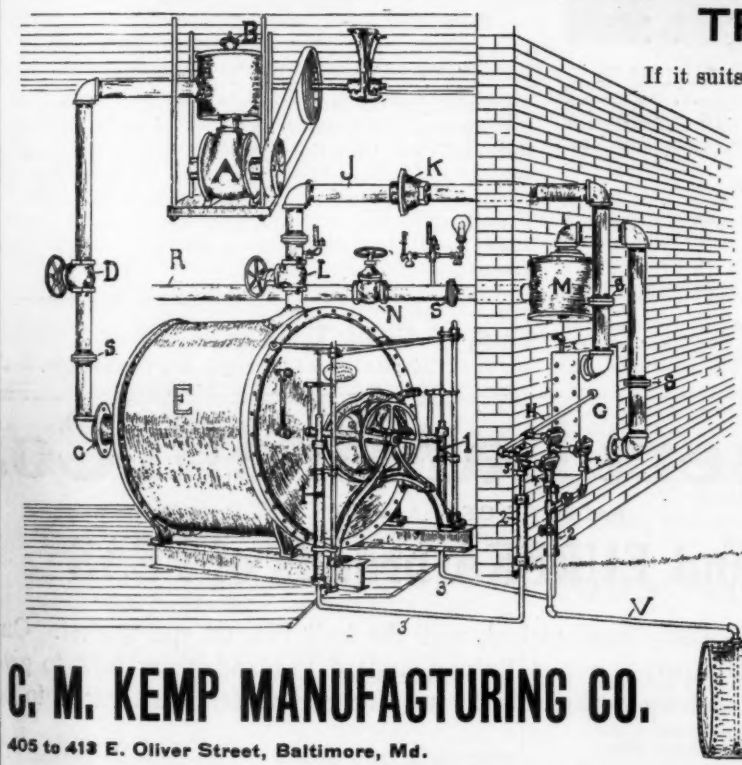

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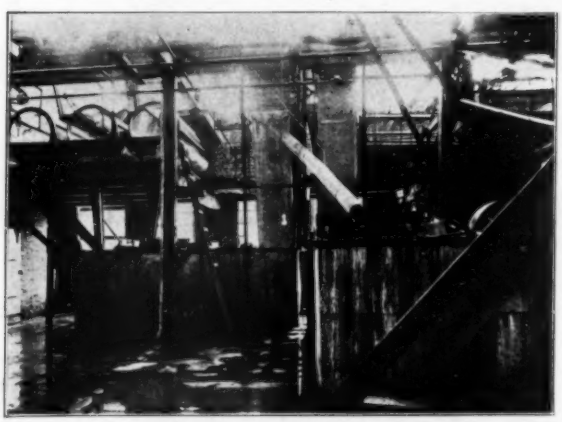
less sloppy, cement is the best possible material to use in their construction. The main plant and tomato building of the "Sunlight" plant being built of brick and only one story, and every foot of the nearly three acres of floor space being of cement, makes it possible to keep the factory thoroughly clean. The solid cement floor over the entire plant permits of frequent flushing, which may be quickly and efficiently done. An extensive sewerage system, an important feature studied with special care in planning the new Polk cannery, is provided for taking the water off. Disinfection in the factory is accomplished by means of live steam, instead of sulphite of soda or chemical disinfectants.

Closets and Lavatories for the Cannery Help.

I had expected much of Ralph Polk (all who know him do, and are never disappointed), yet my expectations as I passed from one department of the "Sunlight" canning plant to another were much more than realized. In the experience of men the reality seldom equals the anticipation, but not so with the "Sunlight" plant—nothing about it disappoints. Everywhere it is complete, even to the closets and lavatories provided for the cannery help. They show that no detail likely to defeat the purpose of those who planned to build a hygienic food factory was neglected. I found the closets and lavatories actually better than many hotels provide for their



Gravity system of grading peas. The peas, which are received from the squirrel cages seen near the upper left-hand corner, are graded in the large salt water tanks shown in the picture.

guests. The closets, ten each for the male and female employes, with a large urinal for the former, are well isolated in a brick building. An attendant is provided in each department, and it is the attendants' duty to enforce the company's strict rules regarding the use of these conveniences, and to keep constantly on hand a supply of fresh towels and plenty of soap. No student of hygiene needs to have the practical value of all this pointed out to him—but there is great need for ample and clean toilet rooms in scores of fruit and vegetable canneries in all parts of the country.

"Sunlight" Factory a Model.

As it stands today, less than eight months after the fire which on December 12, 1906, destroyed Greenwood's greatest industry, the "Sunlight" is a model canning plant, planned with perhaps greater attention to those details which have come to be recognized by the more progressive packers as essential to the maintenance—in a plant handling immense quantities of vegetables containing a large percentage of water—of sanitary conditions, than any other American cannery. A rule requiring that employes be uniformed and manicured has not been put in force in the "Sunlight" canning plant, as in some of the meat canning departments in the great packing houses of Chicago—not yet—but "Polk's Best" products assuredly are put up amid surroundings and by methods calculated to provoke expressions of admiration from the most exacting, and increase public confidence in the cleanliness and wholesomeness and all round superiority of factory packed canned goods.

Maine Notes.

Hon. B. M. Fernald, of West Poland, senior member of the corn packing firm of Fernald, Keene & True, is often pointed out to strangers as the next governor of Maine. He would make a good one. He has hosts of friends, even outside the G. O. P.

It is difficult to find Maine packers at home just now Those who do business on the coast have gone into the country, while the country packers are out for deep sea fishing.

Minnesota Standard "Inspected" Corn.

E. K. Slater, State Dairy and Food Commissioner of Minnesota, is preparing to inspect the output of Minnesota canning factories under the provisions of the law passed by the legislature last winter.

Inspectors will be stationed at each cannery and every can packed will be stamped as follows:

Minnesota Standard
Inspected and Passed
Dairy and Food Dep't.
_____, Inspector.

In addition to the inspector stationed at each cannery one of the regular members of the food inspection staff will visit the canneries during the canning season and superintend the work of the other inspectors. The cost of inspection will be borne by the individual packers. Inspection will apply largely to corn, that being the principal product of Minnesota canneries.

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Factories at MANITOWOC, WISCONSIN

Canners Meeting at Philadelphia.

The committee appointed at the last meeting of the Tri-State Packers' Association at Wilmington, Del., to take into consideration and devise means for improving the conditions governing the sale of canned goods, will meet in Philadelphia to-day.

Features of the August Scribner.

The fiction number of Scribner's Magazine has been an institution for twenty years. In it have appeared some of the most notable short stories, stories that have made the reputation of their authors. The present fiction number (August) preserves this worthy tradition, and each story in it is of unusual interest as a story and of remarkable skill in execution.

Nelson Lloyd has a humorous satire on ancestor worship, entitled "The Grandfathers of the Evolution." These were the maternal ancestors, who are much upset by the sudden appearance of the one strong man on the paternal side, who is really an ancestor to be proud of.

Henry B. Fuller, in "Waldo Trench Regains His Youth," pictures a young enthusiast from Oklahoma against the background of ancient Italy, with an incidental love story.

Frank H. Spearman, the author of the famous "Whispering Smith," in "The Ghost at Point of Rocks," tells a new kind of ghost story, which centers about a desolate railway station in the far West.

A new writer, Lieut. Hugh Johnson, of the United States cavalry, has a dramatic story of life at an army post on the Mexican border, entitled "Lascar," the hero of which is an old army horse.

Mrs. Wharton's serial, "The Fruit of The Tree," in this installment reaches a great situation, the solution of which is bound to excite much discussion.

New Grocery Jobber at Chattanooga.

The firm of Carter Brothers will open a wholesale grocery business at 1011 Chestnut street, Chattanooga, Tenn., September 1. The building has been secured and is being repaired and fitted up for the business. The firm will be composed of Garnett, Carter, J. B. Carter and J. T. Carter, all practical, experienced business men. Garnett Carter will have active management of the concern, which will have a paid-up capital of $50,000. As soon as practicable the company will put a crew of traveling salesmen into the field and make a vigorous effort to secure a share of the grocery trade.

CATSUP MANUFACTURERS

WHY waste time and hundreds of dollars experimenting how to put up Pulp and Catsup without preservative when you can purchase formula for a reasonable amount of money? 1,400 Bbls. Tomato and Fruit Pulp, packed last season with this formula without preservative and not a barrel spoiled. Address

"PURE FOOD," Care the Canner

NEW SEAM SANITARY CAN

No Holes, No Caps—The Entire Top Open

Sealed Without
Heat, Solder or Objectionable Fluxes
PREVENTING
Scorching and Black Spots

Impossible in packing to lacerate delicate food products. Will stand both retort and bath processing. A perfect sanitary can is obtained, eliminating all the faults of the old unsanitary type, making an ideal package, as cheap, more attractive, wholesome and better than anything yet devised. A descriptive illustrated catalogue and sample can sent upon request.

We Furnish Complete Outfits for Making These Cans
Round, Square or Irregular Shapes

All Packers, Brokers, Jobbers, and Retailers should recommend goods packed only in this package.

Max Ams Machine Co.

Mt. Vernon, New York

EASTERN TERRITORY
SANITARY CAN CO.
105 HUDSON STREET
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WESTERN TERRITORY
FEDERAL CAN CO.
19TH AND HARRISON STS.
SAN FRANCISCO, CAL.

Manufacture these Cans For Sale under Our Patents

Want Advertisements.

To Insure Insertion Under This Heading Copy for Want Advertisements Should be in This Office Not Later Than Tuesday.

WANTED

WANTED—EXPERIENCED CORN PACKER, MUST BE sober. State references, terms, etc., in first letter. Address "C. C." care THE CANNER.

WANTED—SITUATION BY A NO. 1 MAN TO TAKE charge of corn machinery during coming pack. Address "C. M.," care THE CANNER.

WANTED—FIRST-CLASS PULP MAKER TO SERVE at Indiana Pulping Station, season 1907. Address "P. S. 100," care THE CANNER.

WANTED—PARTNER WITH $15,000 FOR WESTERN canning factory. Old established business and good trade. Address "C. W. 45," care THE CANNER.

WANTED—THREE EXPERIENCED HAWKINS CAPper operators for tomato season. State references and wages expected. Address "H. K.," care THE CANNER.

WANTED—COPIES OF THE CANNER OF FEB. 15 AND March 1, 1906. Vol. 22, Nos. 5 and 7, whole Nos. 577 and 579.

ATTENTION, CATSUP MANUFACTURERS.

Can place orders for another 1,000 bbls. catsup at from 21c to 35c per gallon in the city of New York and vicinity for the coming season. Accounts solicited. Address "Broker," care THE CANNER.

WANTED—GOOD HAWKINS CAPPER OPERATORS and general canning machinery men. Give references and state wages expected. Address "L. R., 50," care THE CANNER.

WANTED—BUYERS FOR A BOOK ON THE CULture of Asparagus, by the leading authority, F. M. Hexamer. The book contains 174 pages, cloth bound. Price, 50 cts. post-paid. Canners will find asparagus a profitable vegetable to pack, because demand always has exceeded supply and will now be larger than ever, since the asparagus fields in California were destroyed by the floods. Address THE CANNER Publishing Co., 22 E. Randolph St., Chicago.

WANTED—TO SELL THE WORK ENTITLED "THE Book of Corn," by Herbert Myrick, assisted by A. D. Shamel, E. A. Burnett, A. W. Fulton, B. S. Snow and other specialists; illustrated; upwards of 500 pages; cloth bound; price, post-paid, $1.50. Address THE CANNER Publishing Co., 22 E Randolph St., Chicago.

WANTED—BOILED OR CONDENSED CIDER AND Vinegar Stock.

Barrett & Barrett.

Chicago, Illinois.

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FOR SALE—USED ONLY ONE SEASON, SHORT RUN. 1 1900 Model "M" Sprague corn cutter; 1 M. & S. silker; 1 single Burnham cooker-filler. All guaranteed good condition. Address "M. C. 50," care THE CANNER.

FOR SALE—NEW JERSEY QUEEN TOMATO FILLER, cheap; never been used. Address "M." care THE CANNER.

FOR SALE—STEAM BOILERS, NEW AND SECONDhand; tanks, jacket kettles, etc. Repairing carefully and quickly attended to. Page Boiler Co., 14, 16 and 18 Larrabee St., Chicago.

FOR SALE—"THE BOOK OF CORN." THIS IS A work of 500 pages by Herbert Myrick, assisted by B. S Snow and other corn specialists. Profusely illustrated; price, $1.50, post-paid. Address THE CANNER Publishing Co., 22 E. Randolph St., Chicago.

FOR SALE—NEW BOOK ON "CELERY CULTURE," by W. R. Beattie, of Bureau of Plant Industry, U. S. Dept. of Agriculture. This work contains complete cultural directions; fully illustrated. Cloth, 150 pages; price, 50c postpaid. Order through THE CANNER.

FOR SALE—PRESERVING FACTORY LOCATED IN New England States. Has been doing business since 1883. Good trade established and large field to work in. The owner in delicate health and wishes to retire. No bonus required. Possession given any time to Sept. 1st, 1907. Address "F. S," care THE CANNER.

FOR SALE—AN AUTHORITATIVE WORK ON THE culture of asparagus, by F. M. Hexamer. The book is illustrated and contains 174 pages. Price, 50 cts., post-paid. Asparagus is a product offering a rare opportunity to canners to make money on, as supply is always smaller than demand and this condition has been emphasized by the recent destruction of more than 50 per cent of the asparagus fields of California, where the bulk of the American pack is made. Order through THE CANNER Publishing Co., 22 E. Randolph St., Chicago.

CODE BOOKS.

IN RESPONSE TO A GREAT MANY INQUIRIES, WE have arranged to accept orders for all codes published, excepting those intended for strictly private use. We cannot discount publishers' prices, but by ordering through us we serve your conveniences by saving you the trouble of sending separate orders to each publisher. Order code books through THE CANNER, 22 E. Randolph St., Chicago.

IF YOU THINK CANNED GOODS ARE TOO CHEAP, why sell at present quotations, when you can store with WAKEM & MCLAUGHLIN, INC., Chicago, borrow money if needed, and hold goods for higher prices. Goods held

in Chicago command a higher price on account of being on the spot. Warehouses frost proof. Address WAKEM & MCLAUGHLIN, Inc. 362 Illinois St., Chicago.

CANNED GOODS NOTES

The canning factory at Lanark, Ill., recently began its work on green beans. Tomatoes will be handled later.

The factory of the Napa Canning Co., Napa, Cal., has started putting up fruits with a large force of help.

The loss of the Antioch (Cal.) asparagus cannery, which was destroyed by fire July 13, is placed at $45,000.

The canning factory at Big Stone, S. D., is running on peas, of which there is a considerable acreage in that vicinity.

The new Magnolia Canning Co., at Meridian, Miss., has started work for the season. Tomatoes are being handled.

The plant of the Oostburg Canning Co., Oostburg, Wis., is busy with the pea pack, recently having had to work night and day to keep up with receipts from the fields.

At a special meting of the stockholders of the Cedar Rapids (Ia.) Canning Co., held some time since, the capital stock was increased to $70,000.

The Mount Carmel (Ill.)) Canning Co. has been incorporated with $5,000 capital stock, by R. L. Tilton, Benjamin W. Eiler and J. G. Reel.

The canning factory at Pentwater, Mich., has been very busy handling peas. According to a report, the factory has had to run both day and night.

The Mexican Plantation and Cannery Co. has been incorporated at Portland, Me., with a capital of $200,000. The president of the company is G. F. Gould.

The July rise in the Mississippi river did considerable damage to canners' crops. The tomato farms of the Keokuk Canning Co. suffered severely, while considerable cucumber acreage was destroyed.

The Camden (Tenn.) Caninng Co. is ready to start its plant on tomatoes. A recent report stated that the crop was ripening and that by August 1 the plant would be in shape to handle all receipts of raw stock.

The Arlington Canning Co. has been incorporated, according to a report from Memphis, Tenn. The capital stock is placed at $10,000, and the incorporators are W. S. Woodside, A. H. Murray, P. M. Stewart, F. S. Bragg and W. A. Taylor.

The New Albany, Ind., "Ledger" of late date says: "The canning companies at Corydon and English are making preparations to begin handling the tomato crop, which will be coming into market shortly. Although the crop is backward, being several weeks behind other seasons, there will be a big yield if the rains continue. Many thousands of plants were set out, insuring abundant material for the canneries."

From the Des Moines (Ia.) Leader: "The Warfield-Pratt Howell Company of this city has completed negotiations for the purchase of the Pella Canning and Pickling factory, and in the future it will be an adjunct to their business interests in Des Moines. The new owners have already taken hold of the plant, and are getting it in shape as rapidly as possible to begin operations as soon as the crops are ready for delivery."

We reprint the following report from Sulphur Springs, Tex.: "The Sulphur Springs Canning Factory has shipped out eight cars of fruit and vegetables. Several cars went to Oklahoma and Indian Territory, one to Omaha, Neb., and the remainder to Texas cities. There are now ready for shipment twenty cars of blackberries, peaches, beans, tomatoes and okra. These cars are all sold. The factory employs from 75 to 110 hands daily."

PICKLE NOTES

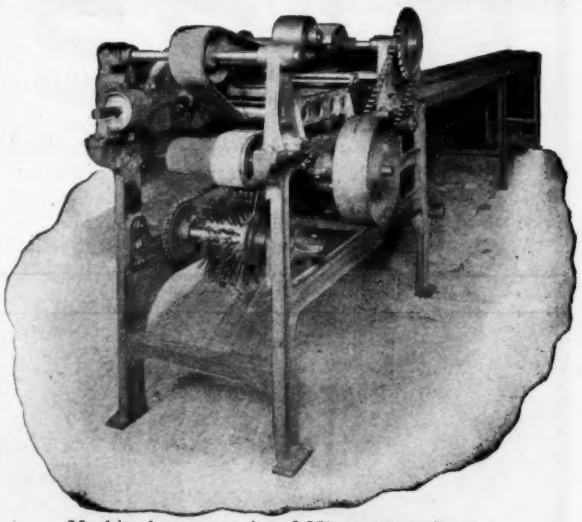
We hear there is a prospect that the H. G. Heinz Co. of Pittsburg will establish a branch plant at Albion, N. Y., if a suitable site can be gotten on the New York Central railroad.

"DO IT NOW"

Neverslip
Can Cap
Dropper.

MANUFACTURED BY
E. M. LANG COMPANY
PORTLAND, ME.

The Conover Corn Husker



Machine has a capacity of 250 ears per minute.
Perfectly husks and silks all sizes without adjustment.
Simple in construction. Thoroughly practical.
Can be operated by unskilled labor.
We have placed machines with some of the largest packers in the country. No packer who has seen it in operation has failed to place order.
Write for particulars to H. Cottingham, General Sales Manager, 119 S. Frederick St., Baltimore, Md., or

THE CONOVER MACHINE COMPANY
226 Land Title Bldg. PHILADELPHIA

The Lutz & Schramm Co. of Pittsburg are to erect a salting station at Leroy, Mich., the work on which is to begin immediately, in order to have the building ready for use not later than October 1.

It is reported that Sprague, Warner & Co. of Chicago will oppose the provision of the new Iowa food law requiring formulas to be printed on labels. In this connection it is stated that another test case of the Iowa law is to be made by a vinegar concern which objects to the prohibition of coloring matter in vinegar sold in Iowa.

FRUIT NOTES

An advice from Lexington, Greene County, N. Y., indicates that apples have been dropping pretty badly.

A recent report from San Francisco stated that prunes were dropping quite heavily in the San Joaquin Valley. It was estimated that anywhere from thirty to fifty per cent of the crop had been lost from this cause.

A recent report from Oregon stated that the prospects for the prune crop in that State were promising. Oregon growers apparently believe that the yield of Oegon Italian prunes will be very large this season, probably taxing the capacity of the driers.

Reports from orchardists in the western part of New York State say that buyers are showing a disposition to contract for winter apples at strong prices. It is claimed that offers of $3.00 for choice fruit have been made, but growers are reported asking more money.

S. Hollick & Co., 16 Basinghall street, London, England, desires to get in touch with a manufacturer of a good American fruit evaporator. Considerable attention is being directed to the drying and preserving of fruit in Cape Town and manufacturers of evaporators will find an open field for their goods.

The publication known as "The Apples of New York," issued by the State Experiment Station at Geneva, has met with a warm reception not only by horticultural experts but by the agricultural public. This was prepared as the first of a series that is to include the principal fruits of the State. The horticultural department is now ready to proceed with the preparation of a volume devoted to grapes that will be submitted to the Commissioner of Agriculture as a part of our annual report.

Food Adulteration Discussed by German Chemists.

The Department of Commerce and Labor has forwarded to THE CANNER a copy of a report submitted by Consul General Richard Guenther of the sixth annual meeting of the Free Association of German Food Articles Chemists, which took place in May.

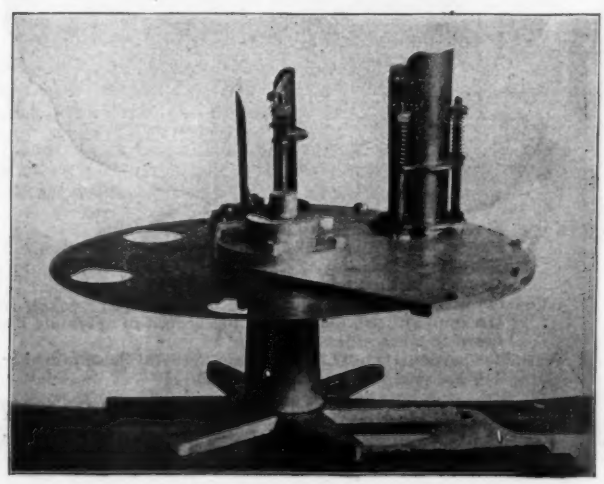
"With reference to commercial fruit juices, jellies and marmalades," writes Consul Guenther, "Professor Fresenius, of Wiesbaden, delivered an address in which he pointed out the questionable quality of a large number of commercial articles of that kind and demanded a correct naming of such inferior goods. Doctor Haertel, of Leipzig, gave a number of recipes which occasionally are used for making 'finest' marmalades. Potato syrup, coloring matter, acids, washed fruit grains, waste from the manufacture of fruit syrups, etc., are the chief ingredients.

"The meeting indorsed the proposition that in future mixtures of the residue of fruits, waste dregs, etc., shall be designated as artificial products, and the addition of washed fruit grains shall be prohibited. The goods shall be so labeled as to correctly inform the purchaser of their quality. With reference to artificial sparkling fruit lemonades it was resolved to demand that they should be labeled as 'artificial.' Professor von Raumer, of the University of Erlangen, an authority in the chemistry of food articles, pointed out the inferior and adulterated articles of honey found in commerce, and laid stress upon the methods of their chemical analysis.

"The representatives of German beekeepers are unanimously of the opinion that the feeding of bees with saccharine substances, for the purpose of increasing the production of honey and not from necessity, should be considered as palpable adulteration. Mr. Fleischmann, of Sondershausen, made interesting statements concerning dark colored Australian honey, the color of which is improved by means of electricity.

"Non-alcoholic beverages came in for discussion. The referee, Doctor Beythien, of Dresden, spoke in detail on the manufacture of such beverages. The use of glucose coloring and addition of flavor, excepting hop oil for non-alcoholic beer, artificial fruit ethers, and saponine means for foaming should be prohibited. The highest percentage of alcohol in beverages called non-alcoholic should not exceed one-half per cent.

"Dr. Popp, of Frankfort, reported in a demonstration lecture with reference to his experience in examining sausages with the aid of the biological method of albumen differentiation. This method was very often decisive where chemical agents were fruitless. In an examination of cheap 'Cervelat' sausage the presence of horse meat could be shown without a doubt."



Little Gem Cap Placer

NEVER misses placing a cap, and NEVER makes doubles. Feeds solder hemmed caps to any size cans. Will work with any continuous capper. Simple—easily operated, nothing to get out of order. Cheap in price.

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ANCHOR BRAND

Of course you use

ANCHOR BRAND SOLDERING FLUX

Because it is the best

Quality
Efficiency
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NON-ACID **NON-ACID**

No Muriatic (Hydrochloric) acid is used in making "Anchor" Flux.
Wonderfully Effective in Preventing Leaks.
No Cans or Contents Discolored.

Order Your Supply Now that You May Have it When Needed

Sold in Barrels, Half Barrels or in Kegs of 10 and 20 Gallons.

UNITED ZINC & CHEMICAL CO.
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UNION AVE. & 22nd STREET
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Manufactured by
GARDEN CITY LABORATORY, Inc.
Main Office 4134 South Halsted St.
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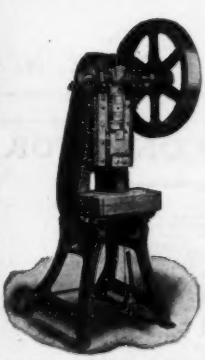
"BLISS"

"PRESSES FOR EVERY PURPOSE"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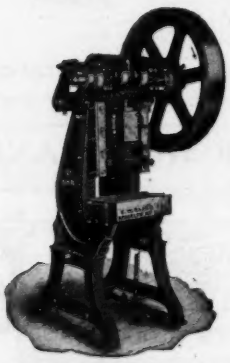
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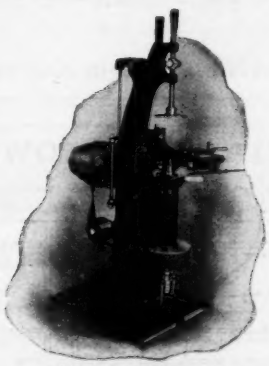
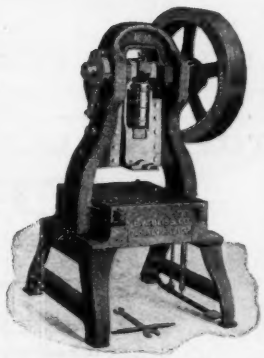

"BLISS" Double-Seamers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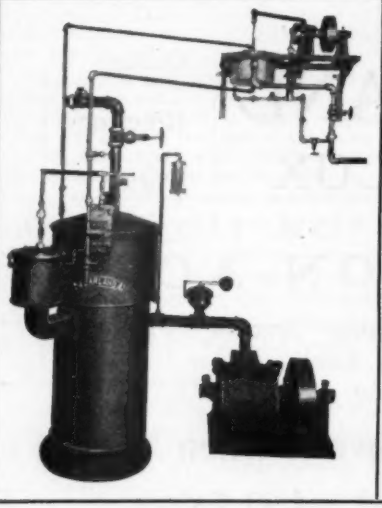

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AT THE LOWEST COST

The Garland system saves labor, produces better and more uniform results, increases the capacity of your Plant, and improves the quality of your product by its convenience and RELIABLE SERVICE.

USES CRUDE DISTILLATE or CROWN GASOLINE 58° to 65° test WITHOUT WASTE or RESIDUUM.

APPROVED BY THE INSURANCE UNDERWRITERS.

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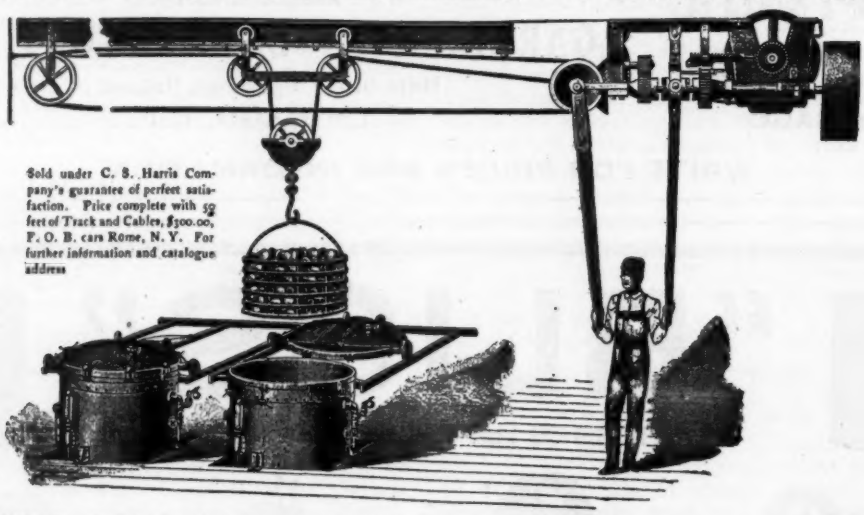
The HARRIS PATENT POWER HOIST AND CARRYING MACHINE



Sold under C. S. Harris Company's guarantee of perfect satisfaction. Price complete with 50 feet of Track and Cables, $300.00, F. O. B. cars Rome, N. Y. For further information and catalogue address

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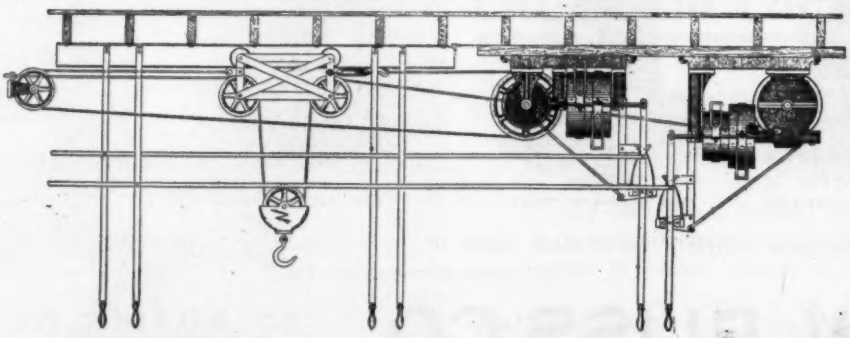
THE SPRAGUE-HAWKINS POWER HOIST AND CONVEYOR



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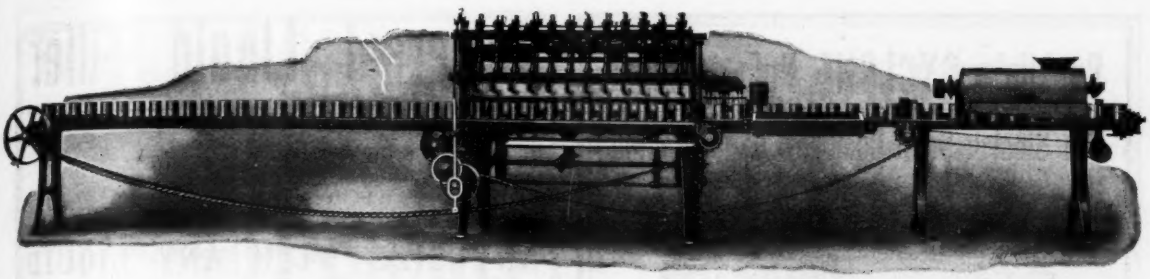

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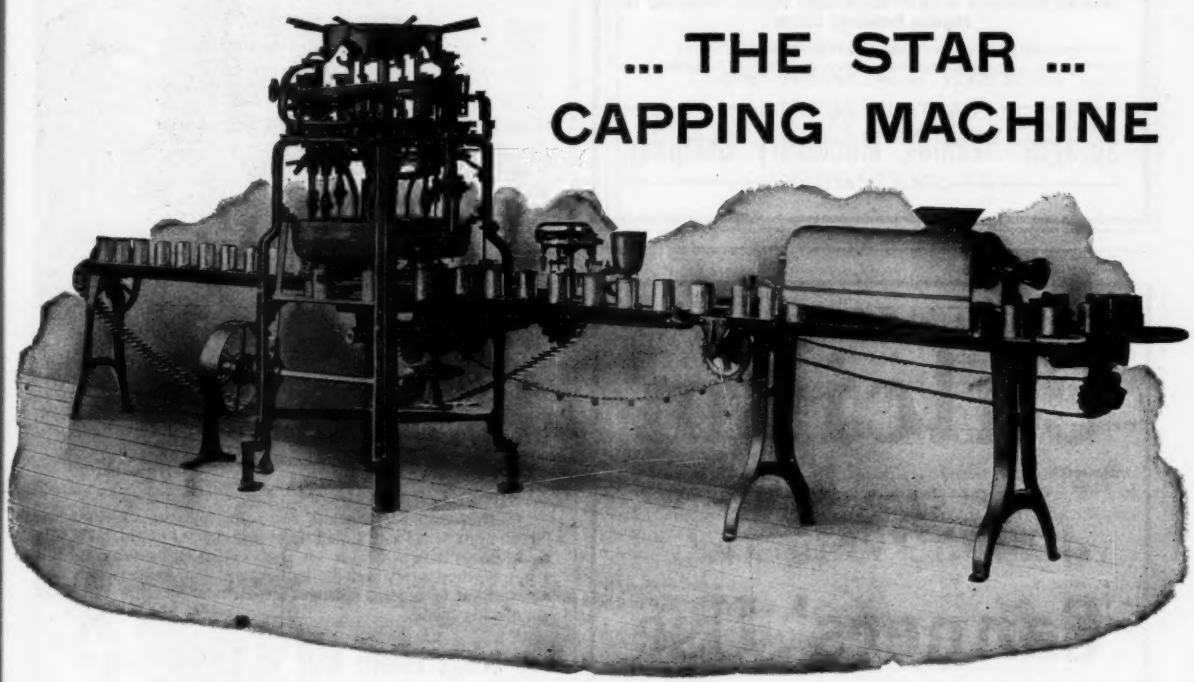
ALL USERS OF THE HAWKINS MACHINE
Consider it the Best Investment They Ever Made.

IF YOU WANT THE BEST BUY THE HAWKINS



... THE STAR ... CAPPING MACHINE

This machine gives excellent satisfaction. It sells at a lower price than the Hawkins and is guaranteed superior to any Capper on the market, excepting only the Hawkins. In it the construction of a Rotary Capper is reduced to the simplest possible elements

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Bucklin's CYCLONE Pulp Machine

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The Sinclair-Scott Company, Baltimore, Md.

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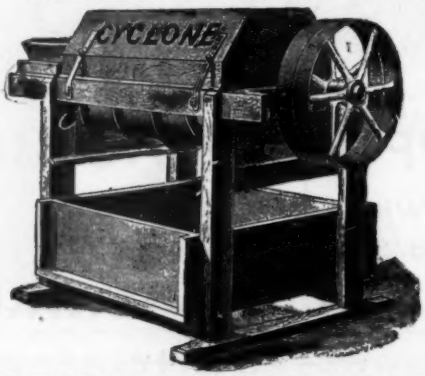

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It is rapid, continuous in action, and self-cleaning.

CAPACITY—75 tons Tomatoes per day; 50 to 60 tons Pumpkins per day. FLOOR SPACE—4x6 feet. WEIGHT—700 lbs.

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SPECIAL MAKE FOR

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NO BLACK CANS

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Universal Liquid Filler

For filling or finishing off Cans or Glass Jars of

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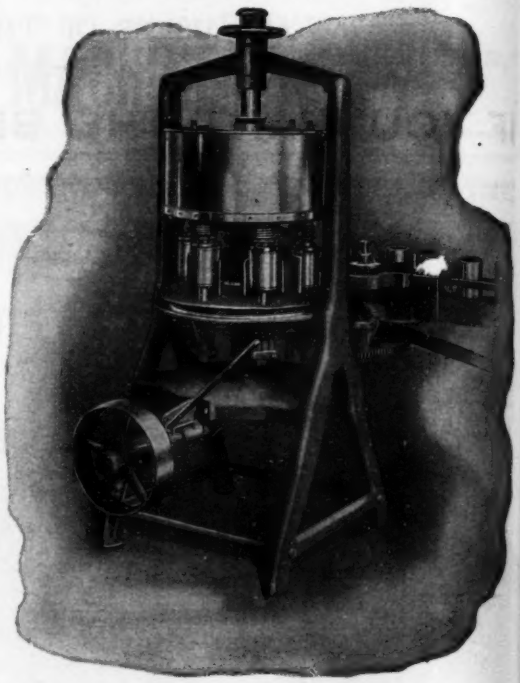
The ideal BRINING OR SYRUPING MACHINE



Continuous, Trayless and entirely automatic. This machine fills the can or Jar with liquid up to any desired height. **IT fills to a dead line** wherever set. **Absolutely no waste.** It is a simple, thoroughly well built, substantial machine which does not get out of order. Changes in height of fill or in size of can are quickly made.

Works Equally Well on Studhole Cans or Open-Top Sanitary Style Cans

Capacity on Gallon Cans 20,000 10 hours, on smaller sizes 40,000.

Gives perfect satisfaction at any capacity up to the above.

Apply for further particulars, stating nature of work and size of can and opening.

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CHEAPER than flour paste. Being dry it saves freight and can be shipped in mid-winter. One pound will make in one minute two gallons of snow-white paste, where boiling water or steam can be had. It makes three times more PASTE than cold water Paste Powders.

PRICES: { In barrels of about 240 lbs. - - 6c per lb.
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Tinnol

For lacquered and plain white tin. Prevents rust spots and does not affect the most delicate colors. Keeps sweet in any weather and does not warp or wrinkle the paper. The BEST paste for tin in the market. Has to be reduced with 50 per cent. of water. PRICE, in casks, - - . 37c per gallon

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MOORE & McFERREN BOXES

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Made of Cottonwood Lumber

HANDSOME LABELS are not in keeping with unsightly boxes. The Moore and McFerren boxes are sawed and planed boxes, clean and well made up, and superior in EVERY RESPECT to the cheap veneer boxes used by some manufacturers.

We shall be pleased to call on or correspond with you in regard to your future business.

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NEW PATTERN
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Write for Particulars

PATENT CORE CUTTERS

Every Kraut Manufacturer should have one. Saves 15% of your cabbage. Gives the Kraut a sweetish sour flavor.

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MEET EVERY REQUIREMENT

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